PATIENT ATTITUDES AND EXPECTATIONS OF PHARMACIST-PROVIDED CLINICAL SERVICES IN CLINIC-BASED COMMUNITY PHARMACIES

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ABSTRACT

While pharmacist-provided clinical services in the outpatient setting have demonstrated improved clinical, economic, and humanistic outcomes, little is known about patients' attitudes and perceptions regarding participation in these services. The purpose of this thesis was to qualitatively characterize patient attitudes and expectations of pharmacist-provided clinical services in the outpatient setting.

This thesis was conducted within the Intermountain Healthcare system. Intermountain Healthcare is a large, integrated healthcare delivery system in Utah and Idaho that consists of 22 hospitals, 160 primary- and specialty-care clinics, home-healthcare services, and 25 hospital- and clinic-based community pharmacies.

Study participants were identified using the Intermountain Healthcare system-wide Enterprise Data Warehouse. Participants were included in the study if they had been prescribed at least four chronic medications. Participants were excluded if they did not speak English or if they could not travel to Intermountain Medical Center.

The first phase of this study consisted of telephone interviews of approximately 25 participants. Participants were asked to describe their current relationship with their pharmacist and physician and describe their level of trust in engaging their pharmacist in their overall healthcare. The second phase consisted of four focus group sessions. Focus group participants were asked to confirm and elaborate on themes identified in telephone

surveys, as well as react to brief presentations on medication therapy management and collaborative drug therapy management.

Participants recognized pharmacists as medication experts, yet they did not currently maintain strong relationships with their pharmacists. Participants perceived that these were caused by poor communication between their providers, their pharmacist, and their payers. When asked to react to the concepts of medication therapy management and collaborative drug therapy management, participants agreed that it should be supported. Concerns related to the security of private information were expressed. Questions regarding how this service would be perceived by physicians were raised. For example, participants were concerned that their physicians would feel as though the pharmacist was 'stepping on his/her toes'.

In conclusion, participants would likely be participatory in pharmacist-provided clinical services in the outpatient setting. The design and implementation of these services should consider concerns and questions articulated by patients in this study.

This thesis is dedicated to my mother.

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CHAPTER I

INTRODUCTION

Adverse events related to medication therapy have a significant impact on the healthcare system. As the prevalence of chronic disease continues to increase and medication therapy regimens become increasingly complex, efforts to address this growing problem are important. Pharmacists in the outpatient setting are uniquely positioned and qualified to address this challenge, yet engaging patients with their pharmacists in this way is a relatively new concept in the profession of pharmacy.

As the provision of pharmacist-provided clinical services in the outpatient setting evolves, it is necessary to address the attitudes and concerns of all parties who may be impacted by the provision of clinical services, especially given that this movement has been primarily driven by the profession of pharmacy. It is important to understand the attitudes and expectations of pharmacists, physicians, healthcare payers, and patients in order to design programs that meet the needs of all parties. The literature is replete with examples of how clinical services result in improved clinical and economic outcomes. However, less data are available that characterize patients attitudes and perceptions of clinical services. Because active engagement by patients is essential to the success of pharmacist-provided clinical services in the outpatient setting, it is important to

understand patient motivators, concerns, and current challenges related to medication therapy.

The purpose of this thesis is to conduct a qualitative analysis of patient attitudes and expectations of pharmacist-provided clinical services in the outpatient setting. Results of this study will add to the current body of knowledge related to these services, and may be used to inform the design of pharmacist-provided clinical services in the future.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Healthcare expenditures continue to increase in the United States (US), and it has become evident to all stakeholders that our current healthcare delivery systems must evolve in order to assure sustainability.[1] Additionally, the proportion of patients with chronic disease states who require complex medication regimens is growing.[1] Many chronic illnesses and medical conditions require multiple medications, which can be quite expensive and complex. As such, the need for targeted medication therapy management becomes evident. As medication therapy experts, pharmacists are uniquely qualified to assist in the design, monitoring, and maintenance of therapeutic plans that include medications. Pharmacists have been trained and are uniquely qualified to perform these services and assist patients in managing their medications.

Pharmacy services have been integrated into various patient care delivery settings. Pharmacists' roles have been justified using cost savings, cost-avoidance, avoidance of adverse events, and improved clinical outcomes.[2-4] In the outpatient pharmacy setting, pharmacist-provided clinical services have been shown to positively impact clinical, economic, and productivity-related outcomes. [2,5,6] A growing body of literature is available that has demonstrated the value of these services, yet there has been very little

consensus exists within the profession of pharmacy regarding the best business and delivery model, marketing strategies, or patient-perceived need for these services. In order to appreciate the evolution of pharmacist-provided clinical services, it is necessary to understand the history of pharmacist-provided clinical services over the last thirty to forty years. A brief review of the evolution of pharmacist-provided clinical services includes major legislative initiatives and professional advancements. A review of common terminology used to describe these services will also be outlined.

Evolution of Pharmacist-Provided Clinical Services

The genesis of contemporary pharmacist-provided clinical services came about in the latter part of the 20th century. Prior to the 1950s, pharmacists were often taught not to discuss the properties or effects of medications they dispensed to patients.[5] As medications became more complex and the overall model of healthcare provision evolved, opportunities emerged for pharmacists to perform services such as patient counseling, therapeutic design, and drug monitoring. In 1975, the term 'pharmaceutical care' was first used to describe care that was intended to ensure safe and rational drug usage.[7] Since that time, the concept of involving pharmacists in the design, education, monitoring, and adjustment of medication regimens has grown and evolved substantially.

Healthcare stakeholders have since recognized the value of these services, and as such, have incorporated pharmacists into many care delivery models in a variety of healthcare settings.[8] Evidence of the growing role of these services is the Center for Medicare and Medicaid Services, (CMS) decision to require a pharmacotherapy specialist as part of the healthcare team for all transplant centers throughout the United States

(US).[9] Additionally, guidelines published by the Infectious Disease Society of America and Society for Healthcare Epidemiology of America recognize the important role that pharmacists play in preventing antimicrobial resistance.[10]

As the value of pharmacist-provided clinical services has become more recognized and the need for these services has increased, pharmacy practice laws have evolved to incorporate the evolving standards of pharmacy practice. Two key pieces of legislation that acknowledged the value of patient counseling and created opportunities for pharmacists to receive payment for these services will be described.

Major Legislation

The Omnibus Budget Reconciliation Act of 1990 (OBRA 90) was the first successful legislative effort to influence the level of clinical service that patients received from their pharmacist.[5] The passage of OBRA 90 required pharmacists to perform drug use reviews and to at least offer to discuss medications with patients prior to dispensing.[5] Based on the pharmacist's professional judgment, pharmacists should discuss issues related to patients' prescribed therapy, including:

- Name and description of medication
- Dosage form, route, and duration of therapy
- Special directions and precautions in the preparation, administration, and use by the patient
- Common severe adverse effects, interactions, and contraindications
- Techniques for self-monitoring therapy
- Proper medication storage

- Prescription refill information, and
- Action to be taken in the event of a missed dose

While OBRA 90 describes key components of patient counseling that may be incorporated into the pharmacist-patient interaction, it does not mandate that every patient receive every point of information. The legislation supports the professional judgment and autonomy of the dispensing pharmacist, and allows pharmacists to tailor the interaction based on the needs and desires of the individual patient. Prior to the passage and implementation of OBRA 90, all federal regulations related to pharmacy addressed the integrity of drug products, including handling of controlled substances and other drug distribution activities.[4] OBRA 90 acknowledged a public expectation that pharmacists should participate in the detection and resolution of problems that may arise from drug therapy.[5]

The expectation that pharmacists should be engaged in the management of drug therapies was further defined with the passage of the Medicare Modernization Act of 2003 (MMA). MMA represented the most significant change to Medicare benefits since Medicare's inception in 1965.[5] A major provision of MMA was establishment of a prescription drug benefit for Medicare beneficiaries. In addition, MMA mandated coverage, and provided reimbursement for, medication therapy management (MTM) activities. While MMA states that MTM services can be performed by a number of healthcare professionals including physicians and nurses, pharmacists were specifically stated as a healthcare professional qualified to perform and bill for MTM services.

MMA went into effect in January of 2006,[5] and since then, outpatient pharmacists have strived to develop a business model that incorporates MTM services into an existing

medication dispensing-based business model. Because the provision of these services is still very much in its infancy, operational challenges have been a significant barrier to their implementation. Effective business and staffing models, marketing strategies, documentation methods, and billing tools have yet to be fully elucidated. Recognizing this need, pharmacy's professional societies have engaged multiple healthcare stakeholders, including patients, payers, and providers, to determine the priorities and necessary steps to standardize the billing and documentation expectations for MTM.[11]

As movements created the expectation for pharmacists to be more engaged in the delivery of patient care, a need arose for demonstrated improved outcomes as a result of pharmacist-provided services. Since then, a number studies designed to demonstrate clinical value have been published in professional literature. Most studies that have explored pharmacist-provided clinical services in the outpatient setting have included measurement of both clinical and economic outcomes in their analysis. [6,12,13] More recent studies have also included patient satisfaction outcomes.[14,15] Major outcomes in these bodies of literature can be grouped into the following primary areas:

- Impact on clinical outcomes
- Impact on economic outcomes, and
- Patient perceptions and attitudes

Each of these areas represents a unique and important outcome measure that is important to consider when evaluating these services.

Impact of Pharmacist-Provided Clinical Services on Clinical Outcomes

Four major studies have been conducted to evaluate the impact of pharmacist-provided clinical services on patient clinical outcomes. These services were provided in the outpatient setting with varying levels of integration with other healthcare services such as physician-provided primary and specialty care. However, these studies consistently designed pharmacist-provided clinical services to meet the needs of patients who had chronic illnesses or were on multiple chronic medications.

The Asheville Project

One of the most notable studies that evaluated the value of pharmacist-provided services in outpatient pharmacies was the Asheville Project.[12] Conducted in Asheville, North Carolina, this study evaluated both the clinical and economic outcomes of medication therapy management (MTM) services in patients with hypertension and/or dyslipidemia. Over a 6-year period in 12 community pharmacies, patients in participating health insurance plans were eligible to enroll if they had a diagnosis of hypertension and/or dyslipidemia, regardless of baseline control. Once enrolled, patients were assigned to a specific pharmacist who acted as their care manager for the duration of the study. The unique components of the program included:

- self-care education provided by professional educators (non-pharmacists)
- face-to-face consultation performed by community and hospital pharmacists, and
- financial incentives, offered by the patient's payer, to encourage patient participation in the program

Participants met with their assigned pharmacist up to once monthly during the study period to receive focused education and planning. Sessions averaged 30 minutes in duration, and took place every 3 months on average. Treatment goals for lipid management were assigned based upon the Adult Treatment Panel III (ATP III)[12,16] and, for blood pressure management, the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC VII).[12,17] Goals were communicated to patients at each session.

Clinical outcomes of interest in The Asheville Project were blood pressure, low-density lipoprotein (LDL) levels, total cholesterol levels, serum triglyceride levels, and high-density lipoprotein (HDL) levels. The percentage of patients who reached their assigned goals for these levels was assessed, as well as absolute changes in serum lipids and blood pressure. Additionally, the number of cardiovascular events (e.g., acute myocardial infarction, cardiac death) that took place during the study period was analyzed.

The proportion of patients who achieved their LDL goals increased from 49.9% to 74.6% during the study period. The proportion of patients who achieved their total cholesterol and triglyceride goals also increased significantly, although no statistical improvement was seen in HDL levels throughout the study period. Blood pressure management improved throughout the study period. The proportion of patients who achieved their blood pressure goals increased from 40.2% to 67.4% ($p < 0.0005$). Additionally, the proportion of patients diagnosed with Stage I hypertension and Stage II hypertension decreased significantly.

The number and severity of cardiovascular events decreased significantly during the study period, as compared with a historical reference period of two years prior to enrollment. Based on incidence rates prior to the study period, investigators expected that 98 cardiovascular events would occur. However, only 48 events occurred during the study period, representing a decrease of 53% compared with the historical time point ($p < 0.05$, OR 0.4691[0.328-0.671]).[12]

The investigators concluded that a community-based cardiovascular disease management program that provided face-to-face counseling by community pharmacists resulted in significantly improved clinical outcomes. The Asheville Project was conducted without randomization or a control group, which may have confounded the results. Another limitation of this study was that patients were recruited from two self-insured health plans in Asheville, North Carolina. However, the Asheville Project was the first of its kind to show both clinical and economic benefits from community pharmacist intervention. Other studies have explored the effects of the interventions used in The Asheville Project in more diverse patient populations.[18] One example is described below.

Diabetes Ten City Challenge

Collaboration between the American Pharmacists Association and GlaxoSmithKline allowed for the launch of the Diabetes Ten City Challenge.[18] The purpose of this study was to expand on the care process model used in the Asheville Project, and apply the same study methods to a different disease state in various locations throughout the US. This program was offered as a voluntary employer benefit at ten distinct geographic sites throughout the US. Services were provided in community

pharmacies, ambulatory care clinics, and on-site work locations. A collaborative care model was used between the employer, physician, pharmacist, and patient. Financial incentives were created for both patients and pharmacists who participated. Patient-centered incentives included waived co-payments for medications and laboratory tests. Pharmacists received reimbursement for time spent in patient visits, and were also required to communicate with each patient's physician after each visit regarding patient status. Patients attended regularly scheduled visits with their pharmacist, which included clinical assessments and progress toward clinical goals. Goals were assigned based upon current American Diabetes Association (ADA) recommendations. Pharmacists ordered and analyzed laboratory testing as necessary.

Clinical outcomes of interest included glycosylated hemoglobin (Ha_1c) levels, LDL cholesterol levels, blood pressure, and body mass index. Additional outcomes included the proportion of patients with current records for influenza vaccines, foot examinations, and eye examinations, which reflected the current practice recommendations of the ADA at the time of the study. Healthcare Effectiveness Data and Information Set (HEDIS) process measures for diabetes management were also collected and evaluated.[19,20] Finally, patient satisfaction regarding services received was also assessed.

Patients enrolled in The Diabetes Ten City Challenge showed statistically significant improvements in Ha_1c, cholesterol, and blood pressure measurements after one year. Glycosylated hemoglobin values decreased on average from 7.5% to 7.1% ($p = 0.002$) during the study period. The proportion of patients who achieved Ha_1c goals significantly increased by approximately 21% during the study period. Mean LDL

decreased from 96.3mg/dL to 93.3mg/dL ($p < 0.001$), with a 13.9% increase in the proportion of patients who reached goal during the study period. The proportion of patients who maintained current influenza vaccinations also increased from 43% to 61% during the study period. The proportion of patients who were current relative to eye examinations increased from 60% to 77% during this period, while the proportion of patients who were up-to-date with foot examinations also increased from 38% to 68%.[14] Investigators concluded that a pharmacist-driven collaborative-care model had the potential to improve clinical outcomes in a clinically meaningful manner. Therefore, this model may aid in the transformation of how the healthcare system manages patients with diabetes.

North Carolina State Health Plan (SHP)

The North Carolina State Health Plan (SHP) assessed the feasibility of conducting an MTM-type program in a large and stable population, which consisted of the SHP employee-base. In this demonstration project, a pharmacist-provided MTM service pilot project was conducted between October of 2004 and March of 2005, as a voluntary, no cost service to state health plan members.[21] The objectives of this study were to describe potential drug therapy problems that could be identified by pharmacists, identify services performed for resolution of those problems, and measure clinical outcomes in terms of changes in drug therapy and subsequent medication use. This voluntary program was designed to target patients who used a large number of prescription medications, and provided reimbursement to pharmacists for their time spent working with these patients.

In order to recruit patients, letters were sent to 1,000 state health plan patients who received the highest number of prescriptions during the first 6 months of 2004. The first 130 responding patients were then offered an MTM session at no cost to them. Of these 130 patients, approximately 80 visits were conducted. A total of 236 drug-related problems were identified by pharmacists, representing a mean of 3.6 problems per patient. The most common problems included potential under-use, potential over-use, suboptimal drug selection, and the presence of another more cost-effective option. A change to improve drug therapy was made in about 50% of the problems identified by the pharmacist.

The authors of this study concluded that pharmacist-provided MTM was successful in both identifying drug-related problems and effecting changes in drug therapy regimens that were designed to improve patient care. Additionally, pharmacists were able to educate patients about their disease states, self-management principles, and the importance of medication adherence. This study demonstrated that pharmacists' independent review of medications with patients can result in identification of potential problems and changes to therapeutic regimens.

Fairview Health Services

Pharmacists in a group of university-associated ambulatory care clinics conducted this study to assess the clinical impact of pharmacist-provided MTM on clinical outcomes and HEDIS-related outcomes in patients with one of 12 identified medical conditions.[13] Patients of the Blue Cross Blue Shield of Minnesota (BCBSM) with hypertension and

hyperlipidemia who received free MTM were compared to a matched-population who did not receive MTM services over one year.

Patients recruited from a single insurance entity were already enrolled as patients at one of six Fairview Health Services clinics in which MTM services were provided. Study patients also had two or more healthcare claims related to their study condition in the 6 months preceding the enrollment period.[13]

Three clinical outcomes were measured:

- goals of therapy achieved
- number of drug therapy problems resolved, and
- status on selected HEDIS measurements

A total of 637 drug therapy problems were identified by pharmacists during the study period. Of those, approximately 78% were resolved without direct contact with the physician. The proportion of patients whose therapeutic goals were being met, as defined by the patient, increased from 76% to 90% during the study period.

Regarding HEDIS measures, approximately 71% of intervention patients and 59% of control group patients met the HEDIS standard for hypertension management ($p = 0.03$). Approximately 52% of intervention patients and 30% of control group patients met the HEDIS standard for cholesterol management ($p \leq 0.001$). Investigators concluded that study results supported a growing body of evidence demonstrating improved clinical outcomes that are associated with pharmacist-provided MTM services.

While evidence exists to suggest that the inclusion of pharmacists in the design, monitoring, and maintenance of medication therapy regimens improves clinical outcomes, it is necessary to ascertain whether this intervention is financially feasible.

Several studies designed to assess clinical outcomes associated with pharmacist-provided clinical services have also assessed economic impact either as a primary or secondary outcome measure.[12,18,21]

Impact of Pharmacist-Provided Clinical Services on Economic Outcomes

While pharmacists have employed their clinical knowledge and skills to improve patient outcomes for a number of years, it was not until the mid-1990s that a movement was formalized to advocate for pharmacists to be able to be paid for their time spent engaged in these activities. It is evident that if pharmacist-provided clinical services are to be reimbursed by payers, the profession of pharmacy will need to demonstrate both clinical and economic benefit from these services to patients. Data regarding the economic viability of clinical services will also assist in the development of payment models for these services in the future. Economic indicators including medication-related costs, non-medication-related costs, and total healthcare expenditures have been used to assess the economic impact of pharmacist-provided clinical services. Most of the large studies that were designed to explore the clinical outcomes of pharmacist-provided clinical services also included economic evaluations, as described below.

The Asheville Project

The Asheville Project[8] explored economic outcomes that included direct cardiovascular medical costs, medication costs, and the costs of the program itself. Per-person-per-year cardiovascular healthcare expenditures decreased from an average of $1362 per year to an average of $734 per year. While medication expenditures increased

during the study period, this was offset by a decrease in overall healthcare expenditures. Overall, cardiovascular-related spending decreased from 30.6% of overall spending to 19.6% during the study period, which was attributable to fewer medical events.

Additionally, the cost of cardiovascular-related events prior to the initiation of this study was $14,343 per event. During the study period, the cost decreased to $9,931 per event. In the population studied, this resulted in a reduction of $928,926 related to averted cardiovascular-related costs. These data demonstrated that the Asheville model has the potential to improve both clinical and economic outcomes. While the Asheville model was associated with overall healthcare savings, further exploration of the economic benefit of pharmacist-provided clinical services, especially using other clinical models, is warranted.

Fairview Health Services

The MTM project conducted within the Fairview Clinics in Minnesota also assessed economic outcomes using the Blue Cross Blue Shield of Minnesota (BCBSM) medical claims database and the Prime Therapeutics LLC database.[13] Total healthcare expenditures were measured in the year preceding the study year, and the costs of providing MTM services were calculated in aggregate. In the year preceding the study, total health expenditures were estimated at $11,965. This annual amount was reduced by 31.5% to $8,197 during the study period ($p \leq 0.0001$). Prescription drug expenditures increased by 19.7% during the study period (not statistically significant), but represented increased utilization of medications. Overall, medication-related expenditure increases were offset by decreases in facility-based claims and professional claims.

The cost of providing these services was estimated to be approximately $239.40 per patient per year. When the cost of handling and processing the additional claims was added, the total cost of providing these services (provider and payer) was estimated to be $266.08 per person per year. The investigators concluded that the cost savings realized by reduced facility and professional fees was sufficient to justify the sustainment of this program.

Like the study conducted within the Fairview Health System, most studies that have assessed the impact of pharmacist-provided clinical services have measured single programs or networks of similar programs. One analysis attempted to characterize these outcomes across a large span of MTM programs and services. This was conducted by a corporation that manages documentation and billing software.

Mirixa Corporation

Economic analyses have also been conducted to assess the impact of MTM on Medicare Part D prescription drug costs, use, and generic dispensing ratio. An analysis was conducted in health plan clients of the Mirixa Corporation, which provides a documentation and billing platform for MTM services.[6] This analysis compared three MTM modalities: community pharmacy-based, pharmacist-staffed call center-based, and educational mailings. Outcomes of interest were analyzed using claims data, health plan enrollment data, vital statistics, and the MTM databases for each health plan.

Among the 1.2 million Medicare Part D beneficiaries enrolled in health plans who contracted with Mirixa, approximately 101,846 met eligibility criteria for MTM. Of these, approximately 21,336 patients received an MTM service (9,140 face-to-face,

12,196 by phone, 49,021 by mailing). During the 2-year study period, patients receiving an MTM service showed a decline in monthly drug costs of $35 (from $669 to $634). Mean monthly prescription counts decreased by 5% ($9.79 to $9.29) in patients who received face-to-face MTM versus 1.3% for call-center patients, and decreased by 1.8% for patients who received MTM mailings. The weighted generic dispensing ratio increased by 9.4% in the face-to-face group, 10.2% in the call-center group, and 8.1% in the group that received MTM mailings. The investigators concluded that MTM among eligible Medicare Part D recipients decreased overall drug costs and increased the generic dispensing ratio.

While studies that assess the economic impact of pharmacist-provided clinical services in the outpatient setting are few, the evidence presented is promising and further exploration is warranted. Pharmacist-provided clinical services are provided in a variety of clinical settings and use varying patient recruitment techniques, documentation and communication strategies, and outcomes measures. Each model of delivery will require economic assessment as these services continue to grow and expand.

Patient Perceptions and Attitudes of Pharmacist-Provided Clinical Services

While studies that demonstrate the clinical and economic benefit of pharmacist-provided clinical services in the outpatient arena are widely available, only a small number of investigators have explored the impact of pharmacist-provided services on patient satisfaction. An even a smaller number have explored patients' attitudes and perceptions of these services prior to patients having received them. Much of the current

body of knowledge has not included patient attitudes regarding MTM or patient satisfaction with MTM as major endpoints.

The Fairview Health Clinics project conducted by Isetts *et al.,*[13] clearly demonstrated both clinical and economic benefit; however, no analysis of patient satisfaction or perceptions was conducted. Additionally, in the hypertension and hyperlipidemia arm of The Asheville Project,[12] no assessment of overall patient satisfaction or willingness to self-refer into the program was conducted.

Most of the data currently available to answer this question has been captured as an outcome of a program that also explored clinical and economic outcomes. Patient satisfaction and perceptions of care are often only assessed after patients have received these services. The major contributions to this body of knowledge are described below.

Diabetes Ten City Challenge

In addition to assessing clinical outcomes, the Diabetes Ten City Challenge explored the impact of a collaborative care model on patient satisfaction.[18] Surveys were administered to enrolled patients at baseline and prespecified follow-up times, approximately 1-year after enrollment. Participants were asked to rate their overall satisfaction with their diabetes care on a scale of one to ten (one being worst possible care, ten being best possible care). Patient satisfaction with their pharmacist was assessed using a 5-point Likert-type scale. A total of 764 surveys were completed at baseline, and 224 surveys were completed after 1-year of enrollment.

During the study period, the proportion of patients who ranked their overall diabetes care as a 9 or 10 out of 10 increased from 39% to 87%. Approximately 97.5% of

patients reported being either "very satisfied" or "satisfied" with the diabetes care provided by their pharmacist. The investigators concluded that the collaborative care model described in this study not only improved clinical indicators, it also enhanced patient satisfaction as well. This study is unique in that it assessed patient satisfaction with pharmacist-provided clinical services related to the management of diabetes over multiple geographic areas and both before and after enrollment in the study. After receiving care provided by pharmacists, patients indicated an increase in satisfaction; however, no data was collected that assessed whether patients would self-refer into this type of care process model if the other financial incentives were not provided.

University of Minnesota College of Pharmacy

Isetts *et al.*[15] examined the effect of pharmacist-provided collaborative drug therapy management on patient perceptions of care and health-related quality of life. This study was conducted in 199 patients who received collaborative drug therapy management (CDTM) as compared to 159 patients who did not receive CDTM (usual care). CDTM services were provided in 15 ambulatory care clinics in the state of Minnesota during a 12-month period. Two standardized assessment tools, including the Consumer Assessment of Healthcare Providers and Systems (CAHPS®) and The Short Form-12, were administered to CDTM patients enrolled in MTM programs and patients who received usual care.[22,23] The CAHPS® survey was developed through the US Department of Health and Human Services as a tool to measure consumers' healthcare experiences. The Short Form-12 is a standardized survey tool designed to assess health-related quality of life.

No statistically significant differences in CAHPS® scores were seen between patients who received CDTM and those who did not. However, a trend toward improvement was seen. Statistically significant differences were seen between groups using the Short Form-12 survey. While this study was one of the first in the literature to assess the impact of pharmacist-provided clinical services on patient satisfaction and health-related quality of life, use of a broad assessment tool that only measured the global patient experience limited applicability.

Assessing Perceptions of MTM among Medicare Part D Recipients

Truong *et al.*[24] assessed patient perceptions of MTM services among Medicare Part D recipients. The objective of this study was to characterize patients' perceptions and expectations about MTM services pertaining to the core elements of an MTM service in the community pharmacy setting. Using a cross-sectional design, a 14-question survey was administered to 81 Medicare Part D recipients. Likert scale questions and open-ended questions were used in the survey, as well as basic demographic questions. This survey was tested in a pilot group for validation prior to being administered to study patients. Of the 250 surveys administered, 81 were returned, yielding a response rate of 32%. Analysis of the demographic characteristics of the study population indicated that approximately half of the responding patients had either multiple chronic diseases or were taking five or more medications. Approximately 25% of respondents expected to spend at least $4000 on prescriptions in 2006.

The majority of responding patients had never heard of MTM services. When the types of services that a pharmacist could provide during an MTM session were described,

approximately 70% of surveyed patients felt as though they were important or very important. Patients indicated that they would prefer to learn about these services using paper brochures, as well as receive an introduction to these services given by their pharmacist.

Investigators of this study concluded that patients had very little knowledge of the core elements of an MTM service in the community pharmacy setting. However, patients were supportive of these services and felt as though they could improve communication and their relationship with their pharmacist. This study is unique in that it only included Medicare Part D recipients, the largest population of patients eligible to receive coverage for MTM services as part of their prescription benefit.

Garcia *et al.* [25] conducted a focus-group survey that explored patients' reactions to information about pharmacist-provided clinical services and MTM. This qualitative study was conducted as a series of three semistructured focus group sessions and included a total of 26 university employees as participants. Open-ended questions were asked regarding medication-related needs, perceived costs and benefits of MTM, and MTM marketing strategies. Focus groups were evaluated using qualitative thematic analysis. Results revealed that patients would like more information about medications that they were taking, and appreciated when pharmacists acted as 'problem solvers'. Some participants (percentage not reported by authors) expressed a desire to receive an updated list of their medications each time they had a change in their medication regimen. Some participants (percentage not reported by authors) expressed concern that their pharmacist seemed 'too busy' to be able to provide MTM services. Additionally, a slide show was provided that described some of the core elements of MTM. Patients responded

positively to the outline of these services and felt as though they would like the assurance of knowing that they "were doing the right thing" with their medications.

When asked about how MTM services could be marketed, four main themes in patient responses were identified. Patients expressed concerns with using the term "Medication Therapy Management". They indicated that a term such as "Med Check Up" or "Med Review" would be more appropriate. Many patients felt they needed to experience MTM services before they would be willing to pay for the service or recommend it to a friends or family. Last, patients also felt as though marketing materials should be made to feel "personal" or should relate to something that they already know. Patients suggested that marketing materials should contain personal photos that demonstrate warmth on behalf of the provider.

This focus group was the first in the literature to describe how patients who have never received MTM felt it should be described and marketed. However, it was conducted in 26 university employees who were taking at least one chronic medication. This represents a fairly narrow subset of the population that could potentially perceive benefits from these services.

Summary

The development and implementation of pharmacist-provided cognitive services, such as MTM, collaborative drug therapy management, and other cognitive services have been primarily driven by the profession of pharmacy. As these services become integrated into healthcare delivery models and their place in healthcare becomes solidified, it is essential that patients both understand and perceive value in these

services. While it has been well-documented that pharmacist-provided cognitive services have the potential to impact clinical, economic, and humanistic outcomes, studies that assess patient satisfaction with these services are not available.

Pharmacist-provided clinical services have been constructed to include disease-state management, MTM, immunization services, wellness and preventative medicine, and focused patient education. MTM is a broad term that encompasses a host of services designed to improve patients' understanding of their medications, as well as other clinical and economic parameters. Organizations that deliver and pay for these services primarily refer patients based upon clinical or economic factors such as the presence of multiple chronic disease states, greater than five chronic prescriptions, or annual expense for medications that is over a prespecified amount. Despite the growth in pharmacist-provided clinical service programs, there is there is little evidence to guide pharmacists in developing services that meet specific patient-driven needs.

Community pharmacies struggle to incorporate MTM into their pharmacies for a variety of reasons, including lack of documentation and billing tools, and lack of patient demand for services. Another major challenge that has been identified by both pharmacists and payers is that patients who are offered pharmacist-provided services often decline them. While the reasons for slow patient-uptake have not been clearly identified, it is evident to all stakeholders that patients may not perceive value in pharmacist-provided clinical services when initially offered them. Several studies, including the Diabetes Ten City Challenge,[18] have administered patient satisfaction surveys at various points throughout the study period. While patient response to these services is positive, no studies are available that have assessed patients' willingness to

self-refer into these programs. Although there are many other types of pharmacist-provided clinical services characterized in the literature, little evidence is available to suggest that patients perceive enough value in these services to participate voluntarily.

Additionally, the business model that community pharmacy was built upon relied on dispensing fees and margins on the sale of medications and other non-medication commodities. As reimbursements are dwindling and mail-order distribution and discount prescription formularies are growing, margins are growing smaller. As a result, patient retention becomes crucial to the viability of the community pharmacy. Effective communication to patients regarding potential benefits of these services could drive patient retention and increase compliance with medication regimens.

Community pharmacies have struggled to adopt new business models that incorporate pharmacist-provided clinical services. More information regarding patient demand or perception of value related to these types of services could aid community pharmacies in their efforts to build services. Rather than developing and implementing wholesale practice changes, pharmacists could focus on only those activities that add value from the patient's perspective in an effort to enhance patient satisfaction and improve patient retention.

Statement of the Problem

While pharmacist-provided clinical services have demonstrated improved clinical, economic, and humanistic outcomes, little is known about how to effectively market and deliver these services in a way that will influence patients' perceptions of value.

Therefore, this thesis will explore patient preferences and reactions to a description of potential pharmacist-provided clinical services in the outpatient setting.

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CHAPTER III

METHODOLOGY

Study Design

In order to characterize the attitudes and expectations of patients regarding pharmacist-provided clinical services in a clinic-based, community pharmacy setting, patients of Intermountain Healthcare outpatient clinics were surveyed regarding their attitudes and perceptions of pharmacist-provided clinical services. Qualitative methodologies were used in this study, which reflect an inductive, or Grounded Theory, approach to analysis.[1] The results of qualitative research lead to the development of a description, characterization, or theory related to the study question. The investigator analyzes specific data points to develop a more general theory about the research question, as related to the population or phenomenon studied.[2,3]

This study design was selected to explore patient attitudes and expectations regarding pharmacist-provided clinical services without imposing pre-conceived ideals or assumptions onto the population. The assumption in using this design is that patient attitudes and expectations related to their healthcare, and specifically, their pharmacy experience, contribute to their decision-making. Therefore, it is important to fully elucidate and understand patients' attitudes when designing and implementing effective pharmacy service models.

In collaboration with the Intermountain Healthcare Office of Research, the Department of Pharmacy Services conducted a qualitative analysis to assess patient attitudes and expectations of pharmacist-provided clinical services, using semi-structured telephone interviews and focus groups. The study was conducted in two phases: telephone interviews were conducted initially and focus group sessions were planned to confirm and further explore themes and issues identified using data collected in the first phase. The scope of this analysis was limited to patients who take multiple medications for chronic conditions as they are considered to represent the population of patients for whom Intermountain Healthcare department of pharmacy is seeking to target services.

The first phase of data collection was conducted using a telephone survey that was administered by the Intermountain Healthcare Office of Research and Marketing. The survey was designed to assess patients' current attitudes and expectations of pharmacist-provided clinical services as well as their satisfaction with current level of understanding regarding their medications. Telephone survey responses were analyzed to identify common themes related to patient expectations of current pharmacy services.

The second phase of data collection was conducted using focus groups. Themes identified during the telephone surveys were tested for confirmation using a focus group methodology.[4] Additionally, a description of pharmacist-provided clinical services, with examples, was provided to focus group participants. Patients were asked to react to this description and indicate their overall impression of this service. Focus group responses were analyzed to identify common themes, which were used to characterize overall patient attitudes and expectations of pharmacist-provided clinical services.

Study Setting

Intermountain Healthcare, founded in 1975, is an integrated healthcare delivery system in Utah and Idaho consisting of 22 hospitals, approximately 150 outpatient clinics, 25 community pharmacies, home-care services, and a health insurance division.[5] The Intermountain Healthcare Department of Pharmacy employs over 300 pharmacists, approximately 50 of which practice in clinic-based and hospital-based community pharmacies. The Department of Pharmacy offers a variety of clinical pharmacy services within the hospitals, and to a limited extent, in the hospital-based clinics.

The greater Salt Lake Valley is the largest metropolitan area that Intermountain Healthcare serves. This geographic region was chosen due to diversity of patient types as well as providing a central location to hold the focus group sessions.

Patient Selection

Patients were identified using the Intermountain Healthcare Enterprise Data Warehouse, specifically the HELP2 prescription database.[6] The HELP2 database captures prescriptions written, but does not capture prescriptions filled at an Intermountain Healthcare pharmacy. Therefore, the pharmacy in which patients chose to fill their medications was not a factor in patient selection. The HELP2 database was chosen so as not to limit the study population to only patients who currently use Intermountain Healthcare community pharmacies. If the outpatient pharmacy information system was used, it would have only captured patients who currently fill prescriptions at one of these pharmacies. In order to obtain a study population that currently utilized a variety of pharmacy types (clinic-based, chain retail, independent, mail-order, etc.), the prescription

database within the clinic health record was utilized. The electronic data warehouse was queried to identify a population of patients who met the following inclusion and exclusion criteria described below. Prescription information was obtained from the Intermountain Healthcare HELP2 prescription database.[6]

The initial results of this query were sorted by number of unique prescriptions as well as by number of refills available. Additionally, American Hospital Formulary Service (AHFS)[7] classifications were used to determine classes of medications prescribed in order to ensure that medications prescribed were considered to be "chronic" medications. Patients were then sorted by age and city of residence to ensure that the potential study population met inclusion and exclusion criteria. The search query was limited to patients who had been seen at Intermountain Medical Group Clinics between November and December of 2009, in order to create a pool of potential study participants who had recently accessed healthcare services at Intermountain Healthcare.

Patients of an Intermountain Healthcare Medical Group Clinic located within the greater Salt Lake Valley, as determined by zip code, were eligible for participation in either the telephone call survey or the focus group. Additionally, patients recruited for this study were prescribed at least four chronic medications. Patients were required to be English-speaking, at least 18 years of age, and willing to participate in the survey in order to be included. Non-English speaking patients, patients less than 18 years of age, patients taking fewer than four prescriptions, or patients with an address outside of the greater Salt Lake Valley area were excluded.

These criteria were chosen in order to recruit a participant sample representative of patient populations that have been previously studied. It is assumed that this group of

participants may perceive a need for pharmacist-provided clinical services or stand to benefit from these services, based on the number of chronic medications prescribed to this patient cohort.

Phase One: Telephone Interviews

The first phase of data collection was conducted using a structured telephone interview (appendix A). Structured interviews were designed to facilitate focused exploration of specific topics rather than to gain insight into social views.[3,4] Specific topics addressed were designed to provide foundational insight and inform the focus group sessions that comprised the second phase of this study.

The interview was administered by Intermountain Healthcare Office of Research personnel and was designed to take approximately 10-12 minutes to complete. The purpose of the telephone-based interview was to assess patients' current attitudes and expectations of pharmacist-provided services, as well as their satisfaction with their current level of understanding regarding their medications. Further demographic data was not collected on this cohort of patients due to limitations in the data collection capacity of the Intermountain Healthcare Office of Research.

Prospective participants were Potential participants were contacted in the evening of the week following the mailed letter and asked to participate. Upon being contacted by the interviewer, prospective participants were informed of the purpose of the call and the purpose of the interview. They were also informed that they were not obligated to participate. If they chose to do so, they would receive a gift card in the amount of $10.00 to a local grocery chain in order to compensate them for their time. Finally, patients were

asked whether they had any questions prior to being asked to give verbal consent to participate in the telephone survey.

Data Analysis

Upon completion of the interviews, data analysis was performed using a grounded theory approach.[1,4,8,9] Transcripts were collated according to question that was asked. The investigator and the research associate independently reviewed transcripts for each question to identify common phrasing which represent a thought or idea. Each time this phrasing or idea appeared, it was be grouped with other instances of its kind. Transcripts were reviewed several times as the identification of pertinent phrases or key ideas are often iterative.[1] When all key ideas were identified, the investigators compared and contrasted data to create categories, or clusters, of ideas. Idea categories were tested in the second phase of this study by asking focus group participants to share their personal thoughts or attitudes related to the idea presented by the focus group facilitator.

Phase II: Focus Groups

The second phase of the study consisted of focus groups among the same population of patients. Focus group sessions were conducted after the telephone interview data had been analyzed. Prospective participants were mailed a letter from Intermountain Healthcare stating that they had been identified as a potential study participant (appendix B). The letter included a brief description of the purpose of the project, as well as a way for the potential participant to decline participation. Potential participants were contacted during the evening of the following week and asked to participate by recruiters employed

by Lighthouse Research, a local market research firm with which Intermountain Healthcare contracted to complete this work. The script used to conduct the recruitment phone calls was designed to inform potential participants about the purpose of the project as well as screen them to ensure that each participant met inclusion and exclusion criteria (appendix C).

Four focus groups were held at Intermountain Medical Center, located at 5121 South Cottonwood Street, Murray, Utah 84157. All focus groups were held in the evening from 7:00pm to 8:30pm due to limitations in scheduling. Each focus group held between 8 and 12 participants. Participants were compensated $50.00 cash for their time and travel.

At the beginning of the session, the research coordinator provided an orientation to the session, and participants were allowed to ask questions prior to completing the consent document and demographic survey (appendix D). Demographic surveys were completed by each participant in order to gather information such as current choice of pharmacy and type of prescription benefit coverage. These data were collected and analyzed concurrently with focus group transcripts in order to group or stratify patient responses by demographic factors. The demographic survey was designed to take approximately 2 to 3 minutes to complete.

The focus group facilitator began sessions by asking open-ended questions to facilitate participant discussion. Additionally, the facilitator introduced concepts that emerged from telephone surveys in order to confirm, and further evaluate, themes that had been identified using the telephone surveys. Second, a pharmacist provided a brief slide show describing three components of pharmacist-provided clinical services, and

briefly answered questions about the presentation. In order to minimize the volume of information that participants were asked to retain, pharmacist presentations were limited to one to two minutes in length. The facilitator then asked questions of the participants. The pharmacist presented a total of three models of pharmacist-provided clinical services, including medication therapy management, collaborative drug therapy management, and patient self-management of medications (appendix E). The information presented by the pharmacist was designed to be easily understood, and was delivered using layman's terms whenever possible.

Focus group sessions were facilitated by staff of the Intermountain Healthcare Office of Research in order to reduce the influence that having a pharmacist in the room might have on participant responses. Focus groups followed a semistructured format in as much as the facilitator was knowledgeable of the purpose and aim of the focus group, but had the latitude to allow the focus group to explore concepts that were introduced by participants in the discussion (appendix F).[3,4,8] Focus group sessions were audio-recorded and were reviewed by the pharmacist investigators and the Office of Research staff using an inductive, grounded theory methodology.

Data Analysis

Transcripts from the focus groups were collated by topic. The investigator and a research associate independently reviewed transcripts by question and identified common phrasing that might represent similar ideas or phrases. Each time similar phrasing or a new idea appeared, it was grouped with the other instances of its kind. Transcripts were reviewed several times as the identification of pertinent phrases or key ideas are often

iterative.[1] When all key ideas were identified, investigators compared and contrasted the results to create categories, or clusters, of ideas.

Taxonomy and themes were identified using a grounded theory approach.[1,4,8] Pharmacist investigators and office of research staff worked collaboratively to identify themes and assign an appropriate taxonomy to participant responses. Once appropriate themes were identified, patient perceptions were described in terms of each theme identified.

The institutional review boards of Intermountain Healthcare system wide and the University of Utah reviewed and approved this study.

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CHAPTER IV

RESULTS

Qualitative analysis of a total of 26 telephone interviews and four focus groups (N = 38) revealed several themes and concepts that allowed for greater understanding of patient attitudes and expectations related to pharmacist-provided clinical services in the outpatient setting. Telephone survey participants did not complete every question on the survey; therefore certain questions contained fewer than 26 responses. Telephone survey data were compiled and assessed prior to focus group sessions, so that any themes identified in the telephone survey could be further explored in the focus groups. Focus groups further explored themes identified during telephone interviews including the concepts of medication therapy management as well as collaborative drug therapy management. Additionally, a brief demographic survey was administered to focus group participants (appendix D). Results of telephone surveys, demographic surveys, and focus groups will be reported and described in terms of general themes identified.

Telephone Surveys

Patients were queried in telephone interviews regarding their perceived need for improved care and services related to medication therapy. While some variation was demonstrated in responses, participants in general indicated that there was a need for

more information and guidance related to medication therapy. Nineteen of the 26 (73.1%) telephone survey respondents felt as though they understood 'completely' why they were taking their medications (Table 1). There was some degree of variability in sources that were used to gather information related to medications (Table 2). Sources of medication-related information included physicians, pharmacists, medication information sheets, and to a lesser extent, alternate sources of information such as the internet. Twenty-three participants (88.5%) identified their physician, and 15 (60.0%) identified their pharmacist as primary sources of medication information.

Table 1.

Telephone Survey Results

How well do you understand why you are taking the medications prescribed to you by a physician, what the benefits are, and what side effects might occur?

Level of Understanding	N (%)
Completely	19 (76.0%)
Somewhat	5 (20.0%)
Slightly	1 (4.0%)
Not at all	0 (0%)
Total	25 (100.0%)

Table 2.

Telephone Survey Results

Where would you say you get the information you need about medications you are taking?

Source	N (%)*
Physicians	23 (92.0%)
Pharmacists	15 (60.0%)
Medication Information Sheets	7 (28.0%)
Internet	3 (12.0%)
Other**	2 (8.0%)

*N = 25; respondents could select more than one category

**Other included family members, and a physician's desk reference

When asked to explain the reasons for their current level of understanding and confidence, a high degree of variability in answers was observed. Four participants (16.0%) indicated that taking the medication for a long time contributed to their understanding and confidence, three participants (12.0%) identified that they had a healthcare background, and three (12.0%) indicated that they felt confident in asking for help or clarification when they did not understand something. Representative quotes included the following:

> "My doctor explains everything and gives me a written report as to why I'm taking them. We discuss why I need them before I start taking them."

> "From the pharmacy standpoint they offer explanations and answer all questions."

> "I love the handout they give with each prescription."

"I've been on it a long time and I know from experience."

When telephone survey participants were asked open-ended questions regarding their pharmacist's role on the healthcare team, 15 (60.0%) participants indicated that pharmacists were responsible to counsel patients on side effects, and 14 (56.0%) responses related to the pharmacist's need to ensure the accuracy of the prescription. The responses were summarized in Table 3. When categorized into dispensing-related activities or clinical decision-making or other cognitive function, 25 (47.0%) of 53 roles identified by participants related to dispensing activities, and 28 (53%) of the roles identified related to clinical decision making or other cognitive functions.

Table 3.

Telephone Survey Results

How would you describe the pharmacist's primary role or job at the pharmacies you visit?

Role	Number (%)*
Counsel about side effects	15 (60.0%)
Ensure accuracy of prescription	14 (56.0%)
Fill the prescription	11 (44.0%)
Check for drug interactions	9 (36.0%)
Clinical decision-making	4 (16.0%)

*N = 25; respondents could select multiple categories

Telephone survey participants were asked questions related to their level of trust and comfort with their pharmacist. Results listed in Table 4 indicated that 92% of participants were completely comfortable asking a pharmacist for advice about a prescription, 4% indicated that they were somewhat comfortable, and 4% indicated that they were slightly comfortable. Furthermore, telephone survey participants were queried regarding the factors that impacted their level of comfort and confidence in asking their pharmacist for advice, which included questions about what kinds of information they would want their pharmacist to know in order to make them more comfortable with pharmacist-provided recommendations and advice.

Table 4.

Telephone Survey Results

How comfortable would you feel asking a pharmacist for advice about your prescription medications?

Level of Comfort	Number (%)
Completely	23 (92.0%)
Somewhat	1 (4.0%)
Slightly	1 (4.0%)
Not at all	0 (0.0)%
Total	25 (100.0%)

Table 5 summarizes responses to questions regarding the types of factors that affected patient's comfort and confidence in asking pharmacists for advice. Thirteen participants cited that they have a strong relationship with their pharmacists, which helped them feel comfortable. Thirteen participants cited the knowledge-base of pharmacists as a key reason they were comfortable with their pharmacist. Factors identified by participants that negatively impacted their comfort level in asking pharmacists for advice included the observation that their pharmacists appeared to be busy, that the pharmacy was not conducive to private conversations about sensitive medications. Representative quotes from telephone survey participants included the following:

> "Through IHC, because I know them, used them before, and trust them."
>
> "A lot has to do with how much knowledge they have, the doctor has to know the body and function, but there is so much new medication that someone has to be up on that just like a doctor is up on treatment and tests and I look to the pharmacist for that."
>
> "Availability, sometimes they are just busy."
>
> "Sometimes if a medication that is kind of sensitive, I'd just as soon not have it blurted all over. There is no way that they can very quietly say what you need to do with it. Sometimes it is a little embarrassing when there are people standing behind you."

Telephone survey participants were asked several questions regarding their comfort-level with pharmacist-directed care. Investigators queried patients regarding their level of comfort with pharmacists choosing medication regimens, viewing patient medical records, ordering laboratory testing, and other functions necessary to these processes. When asked about how comfortable participants would be if their doctor asked their pharmacist to choose the best medication for them based on medical history and

diagnosis, 10 (40.0%) telephone respondents stated that they were completely comfortable, nine (36.0%)responded that they were somewhat comfortable.

Telephone survey participants were asked about their comfort level with having a pharmacist choose the best medication for them at the request of their doctor. Table 6 summarizes participant responses. Nineteen respondents were either completely or somewhat comfortable with this concept.

Table 5.

Telephone Survey Results

Factors that affect patient's comfort and confidence in asking pharmacists for advice

Factor	Number (%)*
Relationship with pharmacist	13 (52.0%)
Knowledge-base of pharmacist	13 (45.0%)
Pharmacist availability	2 (7.0%)
Sensitivity of information	1 (3.0%)

*N = 25; respondents answered this question without prompted categories. Categories were assigned during data analysis

Table 6.

Telephone Survey Results

How comfortable would you feel if your doctor asked a pharmacist to choose the best medication for you based on your medical history and diagnosis?

Level of Comfort	Number (%)
Completely	10 (40.0%)
Somewhat	9 (36.0%)
Slightly	4 (16.0%)
Not at all	1 (4.0%)
Total	25 (100.0%)

When telephone survey participants were asked to explain the reasons for answering the way that they did, comments were either supportive or unsupportive of the concept of pharmacists choosing the best medication for patients. As responses were analyzed, the reasons (either supportive or unsupportive) were grouped into themes. The first theme related to the clinical knowledge and skill of the pharmacist. Eleven comments (44.0%) were supportive of the concept that pharmacists have adequate clinical knowledge to choose the best medications for patients, and three (12.0%) were unsupportive. Representative quotes included

Supportive

> "There are so many different drugs out on the market… I think that pharmacists know the same information with regard to medication as doctors."

> "They went to school for six years to learn it. If he is a good pharmacist he is going to know what you need."

Unsupportive

"A pharmacist doesn't know blood tests and x-rays and all that stuff, a lot goes into it."

"Because the doctor is supposed to know what he is doing more so than the pharmacist."

The second theme identified related to the pharmacist-patient relationship, and explored the impact of this relationship on patient's overall trust and comfort level with pharmacists choosing medications on behalf of the patient's physician. Five comments (20.0%) were supportive and five (20.0%) were unsupportive. Representative quotes included:

Supportive

"I am comfortable with my doctor and with my pharmacist, and I trust them."

"If I knew him well enough. I happen to know the one at IHC."

Unsupportive

"The pharmacists don't know me or my situation, and they just rely on the doctors."

"I don't know if I have that relationship with my pharmacist."

Participants also cited concern related to the pharmacist's scope of practice. Four comments (16.0%) were supportive of this concept in citing that it was the pharmacists' "job" to assist with medication selection. Ten comments (40.0%) were unsupportive in that they felt that this task should be reserved for their doctor. Representative quotes included:

Supportive

"That's their job."

"That is their business and that is what they do."

Unsupportive

"I think the doctor should be aware of what's going on with the medications and it's not necessarily the pharmacist's job to do that."

"Well I expect the physician to know that."

The last theme identified in this line of questioning related to how integrated the pharmacist was on the healthcare team and how much the pharmacist understood regarding a patient's medical history. These comments did not convey support or a lack of support, but rather stated concern on behalf of the participants. Representative quotes included

"He would have to have my complete medical history and genetic background."

"The physician needs to have a big part in it also and not just leave it up to the pharmacist. I don't think the pharmacy has my complete medical history."

Participants were asked additional questions relating to the type of information that pharmacists should have access to if they were to assume a larger role in designing medication therapy regimens. The responses were summarized in Table 7. When asked whether participants believed that their current pharmacists knew enough about them to be able to give good advice and recommendations about medications, the majority of participants (76.0%) indicated 'yes.' When asked if they would be more comfortable with a pharmacist choosing the best medication for them at their doctor's request if that pharmacist had access to their medical records, the participants were fairly evenly split- about half indicating that it would make them more comfortable and about half indicating that it would not.

Table 7.

Telephone Survey Results

Do you believe the pharmacists with whom you currently fill prescriptions know enough about you to be able to give good advice and recommendations about your medications?

Response	Number (%)
Yes	19 (76.0%)
No	6 (24.0%)
Total	25 (100.0%)

Telephone survey participants were asked to state whether they would be more comfortable with their pharmacist prescribing their medications if they had access to their medical records. Fourteen respondents (56%) stated that they would be more comfortable in that scenario, and 11 (44%) stated that they would not be more comfortable. The data were summarized in Table 8.

Telephone survey participants were queried regarding their perceptions of how important it was that their pharmacist had access to their medical records, and the results are summarized in Table 9. The majority of participants felt as though it would be "somewhat" important for pharmacists to have access to the patient medical record. Four participants (16%) felt that it would be extremely important, and 6 participants (24%) felt that it was not important at all.

Table 8.

Telephone Survey Results

Do you think you would be more comfortable with a pharmacist choosing the best medication for you at your doctor's request if that pharmacist had access to your medical records?

Response	Number (%)
Yes	14 (56.0%)
No	11 (44%)
Total	25 (100.0%)

Table 9.

Telephone Survey Results

How important is it for a pharmacist to have access to your medical records?

Level of Importance	Number (%)
Extremely	4 (16.0%)
Somewhat	14 (56.0%)
Slightly	1 (4.0%)
Not at all	6 (24.0%)
Total	25 (100.0%)

Participants were then asked to explain why they answered this question the way that they did. Upon analysis, three themes were identified relative to why pharmacists should or should not have access to patient's medical records: optimization of care, concerns regarding confidentiality, and questions regarding whether this type of service was necessary.

Among the 10 participants (40.0%) who felt that this type of service had the potential to optimize care, a common reason was that the pharmacist could provide a 'double-check' for the physician, as well as answer questions without having to wait for another appointment or a telephone call from the physician directly. There were also comments relating to the fact that the pharmacist could use this information to assist in checking for drug interactions and other duties that are traditionally relegated to pharmacists.

Another theme identified when participants were asked why pharmacists should/should not have access to medical records related to concerns regarding confidentiality. Five (20.0%) respondents stated that they felt giving pharmacists access to this type of information created vulnerability for their privacy to be violated. Participants who cited this as a concern felt that access to their personal medical record should be limited to their doctor, yet some did state that there may be circumstances which would warrant a pharmacist needing to access their record.

Last, four participants (16.0%) stated that they did not recognize a need for pharmacists to engage in these types of services. They felt as though their doctor should know the best medication regimen and saw a clear distinction between the role of the

doctor and the role of their pharmacist. They believed that pharmacists should fill medications quickly and accurately, and that should be the extent of their responsibility.

Demographic Surveys

Demographic surveys were administered prior to starting each focus group session. The purpose of these surveys was to both characterize the demographics of the focus groups, and also to investigate medication-related issues that could be quickly answered in a quantifiable way. Demographic survey questions related to participant age, employment status, type of prescription insurance, and highest level of education. Table 10 describes the age distribution of the focus group participants. The largest age group represented was participants in the 7th decade of life.

Participants most commonly identified themselves as 'retired, not working', which is to be expected given the age distribution shown in Table 11. Approximately 37% of the participants identified themselves this way. The second most common employment status was participants who worked full-time.

Focus group participants were queried regarding prescription drug benefits, and the results are summarized in Table 12. The majority of participants (52.6%) indicated that they have a commercially-provided prescription benefit. Approximately 29% of participants indicated that they had Medicare Part D. It is unknown whether participants with Medicare Part D coverage identified with a commercial plan that manages the Medicare Part D benefit.

Participants were also asked to indicate the highest level of education that they received, and the results are summarized in Table 13. The majority of participants

indicated that they had received some college, and the highest degree earned was a high school diploma in approximately 60% of participants.

Two questions were asked regarding the type of pharmacy used by participants. Participants were invited to check all types of pharmacies that they use. The types of pharmacies used by study participants are summarized in Table 14. Participants most commonly used grocery store-based pharmacies, followed by chain pharmacies. Approximately 16% of participants currently used Intermountain Healthcare outpatient pharmacies.

Participants were asked to indicate which criteria had been used to select their pharmacy. The responses were summarized in Table 15. Participants were invited to select as many criteria as necessary. Convenience was cited most commonly (84.2%) as a criterion upon which participants chose their pharmacy. The next most common criteria cited by participants were insurance company requirements and the pharmacist and staff.

One question in the survey related to various types of medication problems. Participants were asked to indicate whether they had, or had not, experienced any of the medication problems listed. Participants were asked to check all experienced that applied. The participant-reported medication problems were summarized in Table 16. Approximately 50% of patients reported having experienced a bad side effect from medication. Approximately 50% reported challenges with remembering to take medications as prescribed, and 26% reported challenges with remembering to refill medications on time. Difficulty paying for medications was reported in approximately 42% of respondents.

Last, a question was asked to assess whether focus group participants were familiar with the term 'medication therapy management.' Responses to this question were summarized in Table 17. Thirty-four of the 38 participants indicated that they were not familiar with the concept of medication therapy management prior to starting the session. Four of the 38 participants were familiar with the term, but did not completely understand what it meant.

Table 10.

Demographic Survey Results

Participant Age Category

Age Category (years)	Number (%)
18 to 30	0 (0.0%)
31 to 40	2 (5.2%)
41 to 50	9 (23.7%)
51 to 60	7 (18.4%)
61 to 70	14 (36.8%)
71 to 80	5 (13.2%)
>80	1 (2.6%)
Total	38 (100.0%)

Table 11.

Demographic Survey Results

Participant Employment Status

Employment Status	Number (%)
Full-time	12 (31.5%)
Part-time	3 (7.8%)
Not employed	7 (18.4%)
Retired, not-working	14 (36.8%)
Retired, working	2 (5.3%)
Total	38 (100.0%)

Table 12.

Demographic Survey Results

Participant Prescription Insurance Type

Insurance Type	Number (%)
Commercial	20 (52.6%)
Medicare Part D	11 (28.9%)
Medicaid	1 (2.6%)
Discount Cards	1 (2.6%)
No insurance	5 (13.2%)
Total	38 (100.0%)

Table 13.

Demographic Survey Results

Participant Highest Level of Education

Education Level	Number (%)
Some High School	1 (2.6%)
High School Diploma	8 (21.0%)
Some College	15 (39.5%)
Associate's Degree	4 (10.5%)
Bachelor's Degree	7 (18.4%)
Graduate Degree	3 (7.9%)
Total	38 (100.0%)

Table 14.

Demographic Survey Results

Types of Pharmacies Used by Participants

Pharmacy Type	Number (%)
Intermountain Healthcare Pharmacy	6 (15.8%)
Grocery-store Based Pharmacy	25 (65.8%)
Chain Pharmacy	13 (34.2%)
Mail-order Pharmacy	13 (34.2%)
Other	0 (0.0%)

*N = 38; respondents could select multiple categories

Table 15.

Demographic Survey Results

Factors Contributing to Choice of Pharmacy

Factor	Number (%)
Convenience	32 (84.2%)
Pharmacist and Staff	9 (23.7%)
Insurance Company Incentive	9 (23.7%)
Physician Referral	2 (5.3%)
Personal Referral	4 (10.5%)

*N = 38; respondents could select multiple categories

Table 16.

Demographic Survey Results

Please indicate if you have experienced any of the following.

Experience	Number (%)
Bad side effect	19 (50.0%)
Forgetting to take medication	19 (50.0%)
Difficulty paying for medication	16 (42.1%)
Forgetting to refill medication	10 (26.3%)
Left doctor's office with questions unanswered	8 (21.1%)
Difficulty get doctor's office to call back	8 (21.1%)
Not understanding why medications were prescribed	5 (13.2%)

Table 17.

Demographic Survey Data

Participant Familiarity with 'Medication Therapy Management'

Familiarity Level	Number (%)
Not Familiar at All	34 (89.4%)
Somewhat Familiar	4 (10.6%)
Total	38 (100.0%)

Focus Groups

Four focus groups were held after telephone interviews were conducted, with eleven, nine, ten, and eight participants in the sessions. Participants were queried regarding challenges and issues with medications and overall pharmacy experience. Additionally, a pharmacist provided a brief description of medication therapy management (medication check-up) and collaborative drug therapy management (medication team). Focus group participants were asked to give their reactions to these concepts, and share any questions or concerns that they could think of during the session. Most participants readily spoke out, and in cases when a participant remained quiet, the focus group facilitator called upon him/her to share any comments.

Focus group participants were able to quickly give examples of challenges that they experienced with their medications and overall pharmacy experience. Responses were similar across all four sessions, and a total of four themes were identified: lack of effective communication, the pharmacist/patient relationship, medication pricing, and coordination of care.

Lack of Effective Communication

Participants expressed a need to communicate more explicitly with pharmacists. A number of examples were given to illustrate this concept. In three of the four sessions, participants stated that they relied significantly on the medication information sheets that were given when a medication was dispensed. While it was perceived as a convenience to have this, participants expressed frustration with the small font size which made medication information sheet difficult to read, as well as the general nature of the

information. Participants also felt as though medication information sheets should contain less information, and should be more specific to their individual concerns. While participants expressed concern regarding the amount and level of detail that existed on medication information sheets, participants in two of the four sessions felt as though pharmacists did not give any better information.

Another example given to illustrate the need for more explicit communication was that some participants had experienced side effects or adverse events related to a medication, but they had not been warned or counseled to monitor for any side effects. They expressed disappointment that their pharmacist had not communicated that to them. Conversely, some participants who had received this type of counseling appreciated this service.

Participants also discussed the need to be made aware of changes in their medications. Examples included dosage form changes when switching between generic manufacturers, insurance changes, and new information that was available regarding their medications. Several participants described feeling anxiety when the dosage form of their medication did not appear the same as it appeared in the past. They had not always received counseling about this and were not sure why this occurred. Additionally, when co-payments changed, they did not understand why that change occurred, and would have appreciated an explanation. Participants also expressed interest in having their pharmacist explain new information that becomes available about their medications. One participant described his experience with a Cox-II inhibitor that was withdrawn from the market due to safety risks. He was not aware of any safety concern until he could no longer get the medication. Participants agreed that increased communication with their pharmacist

would improve their overall pharmacy experience as well as understanding of their medications.

Patient/Pharmacist Relationship

Some participants cited a positive relationship with their pharmacist, but the majority stated that they did not maintain any relationship with their pharmacist. Several participants stated that they used mail-order pharmacies, which was not conducive to a relationship with a pharmacist. Of the participants who stated that they have a positive relationship with their pharmacist, they agreed that they found it valuable and stated that they would change pharmacies in order to maintain the relationship, if necessary. Of the participants who did not have a positive relationship with their pharmacist, a variety of reasons were given to explain this. Some participants perceived that the pharmacist was too busy to be able to spend time getting to know them. When there were other patients waiting for their medications and the pharmacy appears busy, they did not feel empowered to ask for the pharmacist's time to help with questions or concerns. Another factor that impacted the patient/pharmacist relationship was the perceived high turnover rate of pharmacists. Participants stated that they often see a new pharmacist each time they have their prescriptions filled, which limited their ability and initiative to form a relationship.

Price

Participants cited a variety of challenges related to pricing of medications, including difficulty affording medications as well as frustration and the perception that

medications have different co-payments and prices between pharmacies. Participants stated that it was difficult to understand why there was such a large variation in pricing for similar medications. Other participants felt it was important for pharmacists to make them aware when a generic medication was available so that they could choose if they would like to receive the brand or the generic formulation. Several participants described situations in which their pharmacist identified a less expensive alternative and worked with their prescriber to change the prescription. These participants appreciated this effort, but many participants expressed concern that they did not always know what the best price was for a medication or how to go about getting the best price.

In two of the four focus groups, the topic of patient assistance programs was addressed. Participants perceived that there were programs available to assist them in applying for financial assistance for their medications, but they did not know how to access the programs. Participants felt as though the pharmacist or other pharmacy employee could help them navigate this process.

Coordination of Care

Several participants in all four focus group sessions discussed challenges that they had experienced related to coordination of care. The most prevalent challenge identified occurred when a pharmacist could not or would not fill a prescription based on insurance issues or clinical concern. When the pharmacist had to wait for the physician to clarify the prescription or to discuss an issue related to the therapy, it slowed down the process of obtaining the medication and wasted the patient's time.

Additionally, participants described challenges related to multiple physicians prescribing medications without each of them knowing all of the medications that patients were taking. Participants generally agreed that the process of medication review and insurance eligibility to should be streamlined so that it did not result in a disruption of their care or obtaining medications.

Participants expressed challenges and concerns related to their medications and their pharmacy experience. Participants cited a need for more clear and effective communication between themselves and their pharmacist regarding medication information. Participants also expressed a need to develop stronger relationships between patients and pharmacists. Last, participants expressed difficulty affording and understanding of the pricing structure of medications, and challenges with coordinating care between their pharmacy and their prescriber.

Reactions to the Concept of Medication Therapy Management

Focus group participants were asked to discuss the concept of medication therapy management and share their opinions regarding potential benefits, potential drawbacks, and overall feasibility. In order to familiarize participants with the concept of medication therapy management, a pharmacist gave a brief presentation regarding this concept (appendix E). This concept was described as a ‘medication check up’ in order to more accurately describe the visit in terms that patients could identify with easily. Upon hearing the description of a ‘medication check up’, participants were asked to share their reactions, questions, or concerns. While the majority of the comments regarding the

concept of medication therapy management were positive, concerns and questions were raised throughout all four focus group sessions regarding cost and other logistical issues.

Positive comments reflected the potential benefits of this type of service. The majority of comments related to the actual medication information that could be relayed in this type of session, and acknowledgement that physicians and other practitioners may not have time or knowledge base to adequately describe medications or answer patient questions. Concerns were raised regarding the overall feasibility of medication therapy management related to the costs of the service, as well as other logistical concerns regarding the expected frequency of this type of visit, and potential liability issue.

Medication Information

Among the majority of participants who felt that a medication checkup session would be valuable, the most common potential value cited was that it would be an opportunity for patients to learn about drug interactions, side effects, and risks associated with medications. Participants generally agreed that this type of information was important to understand, and they did not see a current mechanism through which to gain this information. Throughout the focus groups, participants gave examples of instances where a 'medication check-up' would have been beneficial. One participant gave the following example

> I think this kind of communication is wonderful…. Especially [in someone] who was seriously ill. This would be a good thing because I watched them throw drugs at my husband… he was taking so many things and if somebody would have sat down with us at certain points, cause he was seeing so many different doctors, too. So I think it might have been a really good thing when you're taking that many drugs.

Participants in two of the four focus group sessions discussed the value in reviewing regimens to identify and meet patient-defined goals. This concept was described in the presentation that was given by the pharmacist, and participants in those two sessions agreed that there was potential to both save money and simplify regimens. Participants in these two sessions also felt that, while this service might cost money in the short-term, it would likely save money in the long term by avoiding drug interactions and by choosing medication regimens that would cost them and their insurance company less money.

Physician Time and Knowledge Base

Another comment that was made in two of the focus group sessions was the perception that physicians and other prescribers do not always have the time or knowledge necessary to review medications and answer questions regarding medication therapies. Participants described feeling rushed by the fact that the physician or prescriber often ran late, and they did not feel as though they should ask additional questions. One participant gave the following example

> The doctors are so busy, though. Sometimes you don't even think of it until you go home to ask a specific question, or you feel a little rushed because they're already 15-20, or 40 minutes late for your appointment.

While time demands on physicians or other prescribers was cited as a deterrent from asking questions, participants in all four focus group sessions acknowledged that physicians may not have the same level of knowledge regarding medications, drug interactions, and side effects that pharmacists have. Most participants acknowledged that

pharmacists are highly trained as medication experts; however, the actual level of training that pharmacists received was called into question in two of the four focus groups.

Cost of Service

Cost concerns were cited by two participants (5.2%) in two separate focus groups. The primary concern in both participants who raised this issue is that this kind of service may increase the expense associated with visiting the doctor, or that it may increase the overall cost of healthcare delivery. A quote from one participant was

> I don't think it will work. It will cost more. I think we're all too cost conscience right now… So I'd have to pay double or even $10 more per prescription. I would not [do that]. I couldn't.

In all focus groups, the facilitator asked participants to express their opinions regarding how this type of service should be paid for, and how much they would be willing to pay out-of-pocket for a 'medication check-up'. Each focus group gave a slightly different response, but the average dollar amount cited by participants was between $5.00 and $20.00 as a co-payment. Participants generally agreed that insurance companies should pay a standard portion of this kind of service, because they would also save money as a result of these sessions.

Other logistical concerns raised by participants included the expected frequency of medication checkup visits. In general, participants agreed that this session should be offered as an annual visit, or should be offered when new medications were added. In one of the four focus groups, one participant (2.6%) expressed concern over the liability associated with having a pharmacist make therapeutic recommendations. The majority of comments related to patients' willingness to engage with patients were supportive, and

patients identified several aspects of care that could be improved by medication therapy management services.

Reactions to the Concept of Collaborative Drug Therapy Management

In each of the focus group sessions, participants were asked to give their reactions to the concept of collaborative drug therapy management, which was referred to as a 'Medication Team.' The pharmacist described this model as a physician, pharmacist, and patient working together in a collaborative way so that certain aspects of a patient's care could be primarily managed by a pharmacist. In this model, the pharmacist would choose the best medication for a patient based on their medical conditions, laboratory information, and insurance information, and then follow-up with the patient over the long-term to make sure that the medication was effectively meeting the patient's goals. Examples used to describe this model were lipid management and anticoagulation management.

Participant reactions to the concept of collaborative drug therapy management included both positive comments and negative comments. Potential benefits of this model cited by participants included the perception that collaboration between physicians and pharmacists would produce better therapeutic recommendations, as well as the perception that pharmacists may be more accessible than physicians. Participants posed questions and concerns related to how this may impact the physician/patient relationship and the perception that pharmacists may breach the confidentiality of patients' medical record. Participants in each of the four focus groups expressed that they may feel the necessity to clear all pharmacist recommendations with their prescribers.

Benefits of Collaboration/Accessibility

Participants in each of the four focus groups described a potential benefit of collaborative drug therapy management as value in the pharmacist working along with the physician to optimize medication therapy regimens. Representative quotes included

> I think two brains are better…. Doctors can't be experts in everything. They think they are, but they are not. Where a pharmacist, they're specialized to the prescription, the drugs, the dosing.

> I think, probably, it's a good idea for doctors and pharmacists to work together… Doctors are human, too.

Participants identified this type of model as a potential mechanism to solve and resolve medication problems in a more efficient way than the current model of the community pharmacist calling or faxing the physician's office and waiting for a physician to call the pharmacy back.

Another potential benefit of this type of service was the perception that pharmacists are more accessible than other prescribers, which may benefit patients who have outstanding questions or concerns related to their medications. Pharmacist accessibility was described by two of the four focus groups and was not further discussed.

Impact of Physician/Patient Relationship

One concern posed in each of the focus groups was how this type of practice model would impact current physician-patient relationships. Participants raised concerns that their physician may become 'out of the loop,' and that may negatively impact the

physician-patient relationship as well as the overall level of care. Six participants raised this concern. Representative quotes include

> When I was prescribed something by a pharmacist, I would go to my physician and say, okay, this is what he said to do. Is it okay?
>
> I'd go back and check with my physician, or [would want] an email to me saying that he agreed. Something concrete.

Participants questioned how communication would occur between the physician and pharmacist in this setting, but agreed that this type of model would pose a risk of losing communication between the pharmacist and physician as well as a risk of comprising the physician-patient relationship.

Confidentiality of Patient Information

A concern regarding the potential for confidential records to be breached was raised in three of the four focus groups. Participants recognized that sensitive information would need to be disclosed to pharmacists in order for collaborative drug therapy management to be effective. Some participants stated that this would be concerning, and when probed further, participants in two of the four focus groups stated that they were less comfortable with pharmacists viewing their medical records or other sensitive information because the pharmacy was less private than their physician's office. They may also see a different pharmacist each time they visit the pharmacy. Representative quotes included

> The other [concern] is the turnover in the pharmaceutical offices, you might meet one pharmacist and then a few months down the road… oh where did they go?
>
> Doctors usually have some stability.

In general, the portion of time spent discussing questions and concerns related to collaborative drug therapy management was larger than the amount time spent discussing potential benefits. Participants cited more concerns related to collaborative drug therapy management than to the concept of medication therapy management.

Overall Themes Identified

Data gathered in the telephone surveys as well as focus groups and demographic surveys were analyzed using grounded theory methodology described in Chapter III. When data gathered from telephone interviews, demographic surveys, and focus groups were analyzed together, two over-arching themes were identified. First, focus group participants identify a need for improved understanding of medications and medication-related issues. Second, participants reacted positively to the concepts of medication therapy management and collaborative drug therapy management. However, a number of questions and concerns were identified by participants that may affect patients' trust in these pharmacist-provided services.

Need for Improved Understanding

The need for improved understanding of medications and medication-related issues was explored in greater detail during the focus group sessions than in the telephone surveys. However, the demographic surveys corroborated the discussions that occurred in the focus groups in that a large number of focus group participants reported experiencing a medication-related frustration or challenge (Table 17). The most commonly cited concerns by participants included the desire to better understand potential medication

side-effects and drug interactions. Some focus group participants stated that sources of information that they had used were not adequately tailored to their individual needs, and were often difficult to understand and interpret.

Additionally, participants cited challenges with coordinating care among their prescribers, and described frustration when lapses in care coordination resulted in their inability to attain their medications. Participants also felt that it was difficult to make sure that each of their prescribers knew of their other medications when they received new prescriptions. Responses of this nature were observed primarily in the focus groups.

Reactions to Pharmacist-Provided Clinical Services

Participants' attitudes and reactions to the concept of pharmacists playing a more clinical role in patient care were assessed in telephone interviews as well as focus groups. Telephone interview questions explored patients' underlying impressions of pharmacists in terms of medication-related knowledge. Focus groups were designed to provide participants some insight into how these services might look and what patients could expect to gain as a result of participating.

Telephone survey participants indicated that pharmacists were a major source of medication-related information currently, and that pharmacists were viewed as having both dispensing and clinical-decision-making responsibility. When asked how comfortable they would be asking a pharmacist for medication-related advice, participants were generally very comfortable with that concept. The majority of participants were also comfortable with having a pharmacist select the best medication for them.

Focus group participants were generally supportive of the concept of visiting one-on-one with a pharmacist for a “medication check-up”. While reactions to the collaborative drug therapy model were more guarded, most respondents recognized the potential value to this type of service.

A number of questions and concerns regarding these two models were identified in the telephone interviews, and then confirmed and further explored in the focus groups. Participants expressed concern regarding the privacy of their personal medical record should their pharmacist be able to access it in the pharmacy. The reasons cited for this were that the pharmacy does not “feel” secure, that they usually see different pharmacists each time they visit the pharmacy, and that there are usually other patients in the same area.

Another concern cited by participants was the potential for errors to occur due to a lack of communication between providers. Several participants stated that if their pharmacist were to change therapy, they would want to check with their referring doctor prior to implementing the recommendation of the pharmacist. When explored further, this was due to a number of factors including a lack of a long-standing relationship with their pharmacist, as well as not trusting that proper communication would occur between the pharmacist and the referring provider.

The attitudes and perceptions of patients regarding pharmacist-provided clinical services were generally positive. The two data collection methods allowed for the identification of potential themes, and then the further exploration and confirmation of those themes.

CHAPTER V

DISCUSSION

The primary objective of this thesis was to characterize patient attitudes and expectations regarding pharmacist-provided clinical services in the outpatient pharmacy setting. The combined methodologies of telephone surveys, demographic written surveys, and focus groups yielded data that will allow for this characterization, as well as an understanding of the underlying assumptions that may have contributed to these attitudes.

As the profession of pharmacy prepares to more fully integrate pharmacist-provided clinical services in the outpatient setting, it is important to include the desires and preferences of patients. It is also important to understand current challenges that patients experience related to their medications so that programs can be designed to solve patient-identified problems with pharmacy services.

Need for Improved Understanding

This sample of patients was able to articulate a number of areas of frustration with their medications and overall pharmacy experience. The majority of problems identified and discussed in both telephone interviews and focus groups may be addressed by increased communication between pharmacists and patients. A number of barriers exist that limit the feasibility of communication from the patient's perspective.

Communication is often facilitated by a strong relationship between provider and patient, and participants stated in both the telephone surveys and focus groups that they valued relationships that developed over time with other healthcare practitioners, especially physicians. Patients did not perceive relationships with their pharmacist to the same extent that they perceived relationships with physicians. Many times patients stated preferring a 'pharmacy' and not a particular pharmacist. In order to engage patients in increased communication, it will be important to consider how to facilitate positive relationships between pharmacists and their patients.

Focus group participants who explicitly stated frustrations related to a lack of communication stated that they would have benefited from information that, under an ideal model of pharmacy practice, would have been communicated with patient counseling as described in OBRA90. For example, patients reported frustration with experiencing side effects that they had not been warned about, and also reported frustration when their medication dosage changed without being made aware of the change. This demonstrated that either patient counseling has not met the intent of OBRA90, or that despite the efforts of pharmacists to counsel patients, the message is not being clearly received by patients.

This sample of patients also reported experiencing the consequences of poor communication and education regarding medication therapy. Approximately half of focus group participants reported experiencing a bad side effect of a medication, and would have expected to know about the potential side effects prior to taking the medication. Participants also reported a number of frustrations related to their medications, such as

medication safety issues that were reported in the media but not addressed by their pharmacist.

These negative experiences may impact patient adherence to medication regimens, which could have significant clinical and economic consequences. These data showed not only that overall communication improvements between pharmacists and patients are needed, but it also highlighted some specific areas of priority from the perspective of patients who use multiple chronic medications.

Reactions to Pharmacist-Provided Clinical Services

Focus group participant responses to the concept of medication therapy management described as a 'mediation check-up' were consistently positive. Participants easily identified the opportunity to address many of their concerns using a session similar to what the pharmacist described during the focus group session. While patients did not initially consider their pharmacist as a member of their healthcare team, comments indicated that there was opportunity for patients to benefit from a pharmacist being engaged in their care. Participants also responded favorably to the idea of creating a medication list that included all medications and supplements, allergies, disease states, and emergency contact information. The creation of this list was considered one of the core elements of medication therapy management services, and based on participant response to this concept, was one of more valuable aspects of a medication therapy management session.

The idea of a pharmacist taking on a leadership role within the healthcare team and acting as an advocate for the patient by interfacing with prescribing physicians and

healthcare payers was met with positive reactions. This concept was described as "the pharmacist working on behalf of the patient with other healthcare practitioners to design a medication regimen that was tailored specifically for that patient." The session was described as an opportunity for patients to describe their goals of medication therapy (i.e., lowest cost regimen, simplified regimen, regimen, etc.), and have a pharmacist work with other providers to meet those goals. Participants did not initially perceive this process as being viable until the pharmacist explained examples of how regimens could be modified to meet patient-specific needs. Upon hearing a few examples of medication regimen changes that could potentially result from this type of session, participants were much more enthusiastic about this opportunity.

Another concept that emerged in these discussions was related to increasing the clinical role of community pharmacists. Participants identified themselves with a pharmacy, rather than a pharmacist. Yet, they identified with their physician, and not necessarily their clinic or physician's office. This finding was significant in that it demonstrated that participants do not currently perceive that their pharmacist is engaged with them over time. Many of the benefits that pharmacist-provided clinical services could bring on the part of patients are dependent on a trusting relationship that is built over time. Efforts to build the relationship between patients and pharmacists may impact the readiness that patients have to participate in these types of services.

In summary, most participants were not currently realizing the full benefit of a pharmacist participating in their care beyond that of medication dispensing and basic counseling. This is likely due to a number of factors, but a contributing factor may be the

fact that patients were not aware of benefits that pharmacist-provided clinical services could add.

An interesting finding was that many of the positive comments were related to the concept of medication therapy management, that when deconstructed, were benefits that patients could expect to gain from medication counseling. For example, participants found value in learning about potential side effects of medications and the interactions between over-the-counter medications and some prescription medications. This reflects both a validation that patient counseling is an essential component of medication dispensing, as well as an indication that this type of patient counseling is not consistently delivered in an effective manner.

Study participants in telephone surveys as well as focus groups generally trusted pharmacists' knowledge and expertise related to medications. However, the extent to which they would trust pharmacists to assume more decision-making responsibility related to medication regimen design, patient monitoring, and patient education was related to a number of factors, including the design of the program, communication between referring physician and pharmacist, pharmacists' clinical knowledge, and the design of the pharmacy. Further research is needed to fully understand whether patients would trust pharmacists this capacity.

An interesting factor that contributed to participant reservations regarding collaborative drug therapy management was the security of patients' confidential medical information. Participants expressed concern that their private medical information would be seen by practitioners other than their physicians. When asked to describe their concern further, participants stated that a pharmacy was not conducive to their medical

information remaining private. For example, a busy pharmacy with many patients in the lobby or waiting area where no private consultation area exists would not be considered an appropriate venue for private medical information to be viewed and used in patient education.

Pharmacists and pharmacies providing clinical services in the outpatient pharmacy setting should consider these data as they plan and execute these services. Business and clinical practice models should address the major questions and concerns that were identified by this sample, which may reflect a patient population that stands to benefit most from these services. Focus should be placed on building long-term relationships between pharmacists and patients, communicating and educating patients regarding the clinical knowledge-base and expertise of pharmacists, and building communications infrastructure whereby frequent communication may occur between pharmacists, referring physicians, and patients.

Study Limitations

It is important to consider the patient population that was represented by participants of telephone interviews and focus groups, and apply their reactions and ideas in the appropriate context. Potential participants were patients of Intermountain Healthcare, an integrated healthcare delivery system in Utah. Patients were asked to participate if they had been prescribed at least four chronic medications. The pharmacy that patients used to fill prescriptions was not considered in the inclusion criteria.

Participants were selected based on these criteria, because it was presumed that they would have more experience with managing medications and interacting with

pharmacists than other patient populations. Additionally, the sample of participants used in this study reflected the criteria used by health insurance programs and Medicare Part D providers that currently offer reimbursement for pharmacist-provided clinical services, such as medication therapy management. Data collected and themes identified in this thesis may be utilized in the design and implementation of pharmacist-provided clinical services that are tailored to meet the needs of similar patients, but may not necessarily reflect the expectations of other patient types.

This study was limited by the small sample size of both telephone participants and focus groups. A larger sample size would have increased the ability of these data to be generalized to broader patient populations. Additionally, the group of participants was relatively homogenous. The decision was made to query this population because it was understood that this population would most likely benefit from pharmacist-provided care in the outpatient setting. However, other important groups of patients and pharmacy customers were not included in this study. For example, patients who use pharmacy services infrequently will likely have a distinct set of attitudes and expectations about their overall pharmacy experience and a different attitude regarding medications in general. Questions regarding the occupation of study participants were not asked in the telephone surveys or the focus group sessions. Participants with backgrounds in healthcare delivery may have provided different responses than those without healthcare backgrounds.

This study was conducted within an integrated delivery network. Implicit assumptions in the models that were posed included an interoperable medical record and the ability of pharmacists to communicate efficiently with physicians and other

healthcare practitioners. Outpatient pharmacists continue to struggle to gain access to these kinds of information, and may not be able to provide the same level of service as was described to study participants in all outpatient pharmacy settings.

The majority of participants in the telephone surveys and focus groups generally did not describe strong relationships with their pharmacists. It is unknown what impact this may have had on participant responses to the survey questions and concepts described in the focus group sessions. Patients who have a positive relationship with their pharmacist currently may perceive more or less value from these kinds of services than patients who do not have a positive relationship with their pharmacists. This study could have explored this concept further by grouping focus group participants by their perception of their current relationship with their pharmacist.

Another limitation of this study was the low quality of audio-recording that was recovered from the session. The ambient noise in the room and the limitations of the recording equipment made the recordings difficult to dictate directly. The investigators utilized these audio-recordings in addition to notes taken during the session to compile patient comments.

Finally, a pharmacist was present during the focus group sessions. This may have had an impact in the responses of the focus group participants in an immeasurable way. In order to minimize the impact that the presence of a pharmacist might have brought, the focus group facilitator (nonpharmacist) led the meetings, and the pharmacist only spoke to give the participants brief presentations. The pharmacist did not answer questions throughout the sessions.

Future Research

Future efforts within the profession should focus on elucidating differences between patient counseling and medication therapy management services, as well as differentiating patient-preferred educational modalities. While most healthcare stakeholders understand the importance of proper patient counseling for medications, the process has not been successfully implemented throughout all medication dispensing models. Given the fact that proper education has the potential to reduce medication errors and increase compliance in the outpatient setting, work of this nature is essential as pharmacy continues address the need for adequate patient education.

Additional research is necessary to determine adequate reimbursement rates for pharmacist-provided clinical activities in the outpatient setting. The misalignment of clinical goals and reimbursement models may be a major contributing factor to the current challenges in educating patients. Specifically, additional research is needed to explore the true costs of delivering medication therapy management or other patient education as well as the financial impact of these services on overall health expenditures.

This thesis characterized patient attitudes regarding pharmacist-provided clinical services delivered in the outpatient setting. Additional research that explores both physician attitudes and pharmacist attitudes is also needed. As pharmacists take on more clinical responsibility, collaboration and communication between healthcare providers becomes increasingly important. Further exploration into the needs and expectations of pharmacists and physicians is necessary to ensure that efforts to grow these services will be successful.

Conclusions

In conclusion, the population studied experienced a variety of medication-related and pharmacy-related challenges. Participants studied also expected to receive accurate and pertinent information about their medications, but they did not necessarily look to get this information from pharmacists. Sources used to gather medication-related information included pharmacists, but participants cited other means of education to a greater extent than they cited pharmacists. When asked to react to the concepts of medication therapy management and collaborative drug therapy management, participants responded favorably to medication therapy management, and maintained some reservations and concerns regarding the concept of collaborative drug therapy management. The data collected in this thesis may provide insight into how patients experienced the pharmacy and what they expected from their pharmacist. This information can inform strategic planning for community pharmacies, especially in an integrated delivery network whereby pharmacists may work closely with other healthcare practitioners.

APPENDIX A

TELEPHONE INTERVIEW SCRIPT

Patient Perceptions of Pharmacist-Provided Services within Intermountain Pharmacies

Interview Script

Hi. This is (*interviewer name*) calling on behalf of Intermountain Healthcare's Strategic Planning and Research Department. We conduct market research that assists Intermountain Healthcare in providing better services for our patients. May I speak with (*patient name*)?

If asked why calling:
I'm calling to invite (*patient name*) to complete a brief interview about some important healthcare issues.

If worried that it is not a legitimate call: I am one of the telephone interviewers employed by Intermountain Healthcare's strategic planning and research department. Since we do a lot of our interviewing in the evening and weekend, we often call from our homes. If you'd like to speak with the Senior Researcher at Intermountain in charge of the study, I'd be glad to have him call you. His name is Sean Meegan and his direct line at Intermountain is 801-442-3039.

If patient is called to phone:
Hi. This is (*interviewer name*) calling on behalf of Intermountain Healthcare's strategic planning and research Department.

We're talking to patients who have prescriptions at an Intermountain Healthcare pharmacy about their perceptions of pharmacist services. Would you consider taking 10 or 15 minutes to answer some questions? We're offering a $10 Smith's gift card as a small thank you to people who participate.

If no:
Ok. Thanks for your time. Have a good day/night.

If later, set callback.

If yes, or begin here for callback:
Great! Thanks for your willingness to help out.

Let me assure you that anything we talk about will be completely anonymous and confidential. We'll be reporting data at the group level and will never identify a particular individual's responses.

Screener:
First, just to confirm: Have recently received prescriptions at an Intermountain Healthcare pharmacy?

Yes
No → I'm sorry, but we're only doing interviews with recent pharmacy patients at this time. Thanks for your willingness to help out though. Have a good day/night.

Ok, good. Let's begin

1. How well would you say you understand <u>why</u> you are taking medications that have been prescribed to you by a physician, what the benefits are, and what side effects might occur with those medications? Would you say…?
   Not at all
   Slightly
   Somewhat, or
   Completely?

2. Can you tell me why you rated it that way? (*Verbatim*)

3. Where would you say you get the information you need about medications you are taking? (*Unaided*)
   Physician
   Pharmacist
   Internet
   Literature that came with medication
   Other (*specify*)

4. Let's suppose you had questions or concerns about medications you were taking. Who would you contact about those questions or concerns? (*Unaided*)
   Physician
   Pharmacist
   Internet
   Literature that came with medication
   Other (*specify*)

5. How would you describe pharmacists' primary role or job at the pharmacies you visit? (*Verbatim*)

6. Is there anything else pharmacists have responsibility for? (*Verbatim*)

7. How comfortable would you feel asking a pharmacist for advice about your prescription medications? Would you say…?
   Not at all
   Slightly
   Somewhat, or
   Completely?

8. And why is that? (*Verbatim*)

9. What do you think would make you feel more comfortable asking a pharmacist for advice about your medications? (*Verbatim*)

10. How comfortable would you feel if your doctor asked a pharmacist to choose the best medication for you based on your medical history and diagnosis? Would you say…?
    Not at all
    Slightly
    Somewhat, or
    Completely?

11. And why is that? (*Verbatim*)

12. And what do you think would make you feel more comfortable with a pharmacist choosing the best medication for you at your doctor's request? (*Verbatim*)

13. What do you think would be most important for a pharmacist to know about you to be able to give good advice and recommendations about your medications? (*Verbatim*)

14. Do you believe the pharmacists with whom you currently fill prescriptions know enough about you to be able to give good advice and recommendations about your medications?
    Yes
    No

15. Do you think you would be more comfortable with a pharmacist choosing the best medication for you at your doctor's request if that pharmacist had access to your medical records?
    Yes
    No

16. How important do you think it is for a pharmacist to have access to your medical records? Would you say…?
    Not at all
    Slightly
    Somewhat, or
    Not at all?

17. Can you tell me why you rated its importance that way? (*Verbatim*)

That's all the questions I had for your today. Thanks very much for your time. Before we get off the phone, can you tell me the name and address to which you'd like the Smith's gift card sent?

Name/address

Thanks again. Good bye.

APPENDIX B

LETTER TO PROSPECTIVE PARTICIPANTS

Intermountain Healthcare
Department of Pharmacy Services

Date

Personalize by addressing to patient

Intermountain Healthcare will be conducting a research project over the next couple of months that examines patients' experiences with their pharmacists. The research will benefit patients like you by improving coordination of pharmacy services.

You are eligible to participate in this research study regardless of where you purchase your prescriptions. You were chosen as a potential study participant through a confidential review of your medical records.

As part of this study, we may call you and ask you to participate in a telephone survey about how satisfied you are with your visits at your pharmacy and what you expect from your pharmacist when they fill your prescriptions. We may also call you and invite you to participate in a focus group. Focus groups involve meeting with several other people and a researcher and discussing a particular topic; in this case, the discussion will be about what patients expect from their pharmacist.

You are not required to participate in any aspect of the research project. If you do not wish to participate, you may simply state that you are not interested in participating when you are called by a study coordinator. Neither your doctor's office nor your pharmacy will know whether you have chosen to participate or not. Also, your answers will be kept completely confidential, will never be associated with your name, and will only be summarized together with many other participants'.

All information that has been used to identify you (for example; your name, telephone number) will be securely discarded once the study is complete.

If you have any questions, or do not wish to be contacted, please contact Melissa Skelton Duke, at 801-442-3140.

Regards,

Melissa Skelton Duke, PharmD
Health-System Pharmacy Administration Resident
Intermountain Healthcare
36 South State Street, 17th Floor
Salt Lake City, Utah 84111
Missy.Duke@imail.org

APPENDIX C

FOCUS GROUP RECRUITING SCRIPT

Intermountain Healthcare
Department of Pharmacy Services

Outpatient Pharmacy Focus Groups

Recruiting Script

Hi. This is (*recruiter name*) with Lighthouse Research calling on behalf of Intermountain Healthcare. Can I speak with (*patient name*)?

If asked by someone other than patient why calling:
We're calling with an invitation to participate in a research study.

If asked by patient how information was obtained:
We are a professional research company and Intermountain Healthcare contracts with us to recruit for their focus groups. They provide us only with names and phone numbers of recent patients. None of your medical information was every disclosed.

If patient wants to talk to someone at Intermountain:
Sean Meegan is the study coordinator at Intermountain Healthcare. He would be glad to speak with you about any questions or concerns you have. He can be reached at 801-442-3039.

If patient comes to the phone:
Hi. This is (*recruiter name*) with Lighthouse Research calling on behalf of Intermountain Healthcare.

You might recall recently receiving a letter from Intermountain Healthcare describing a research project about pharmacy services. I'm calling today to invite you to participate in a focus group where you would discuss your experiences with and expectations for pharmacy services. You would also read and complete a short survey in the group. We're holding 4 focus groups in the evenings starting on Monday, April 19, and would provide you with a $50 thank you for participating in one of them.

Would you be interested in participating in one of the groups?

If no:
Okay. Thank you for your time today.

If yes:
Great.

We'll be holding the groups on Monday, Tuesday, and Wednesday, April 19, 20, and 21, and on Monday April 26. The groups will be held from 7 to 8:30 PM at Intermountain Medical Center, which is the hospital in Murray that you can see from I-15.

On which of those days do you think you'd be able to attend a focus group?

- Monday, April 19 at 7 PM
- Tuesday, April 20 at 7 PM
- Wednesday, April 21 at 7 PM
- Monday, April 26 at 7 PM

Excellent. On…
(*use appropriate description*)

- Monday, April 19, the group will be held at 7 PM in classroom 5 in the Doty Education Center at Intermountain Medical Center.
- Tuesday, April 20, the group will be held at 7 PM in classroom 1 in the Doty Education Center at Intermountain Medical Center.
- Wednesday, April 21, the group will be held at 7 PM in classroom 8 in the Doty Education Center at Intermountain Medical Center.
- Monday, April 26, the group will be held at 7 PM in classroom 3 in the Doty Education Center at Intermountain Medical Center.

I'd like to be able to send you a reminder note, a map, and directions to the group. Is there an email address to which I could send those?

If yes:
And what is that email address?

If no:
Ok. To what address would you like me to mail the reminder note and map?

Great. I've got you signed up for a focus group on…
(*use appropriate description*)

- Monday, April 19, at 7 PM in classroom 5 in the Doty Education Center at Intermountain Medical Center.
- Tuesday, April 20, at 7 PM in classroom 1 in the Doty Education Center at Intermountain Medical Center.
- Wednesday, April 21, at 7 PM in classroom 8 in the Doty Education Center at Intermountain Medical Center.
- Monday, April 26, at 7 PM in classroom 3 in the Doty Education Center at Intermountain Medical Center.

Please try to arrive about 5 minutes early, so the group can get started right on time. If for some reason you need to cancel or have any questions about the project, you can contact Sean Meegan with Intermountain Healthcare at 801-442-3039.

Thanks again and have a good day.

APPENDIX D

DEMOGRAPHIC SURVEY

Intermountain Healthcare
Department of Pharmacy Services

Outpatient Pharmacy Focus Group

Participant Survey

Where do you usually have your prescriptions filled? (*check all that apply*)

- □ Intermountain Healthcare pharmacy
- □ Grocery-store based pharmacy (i.e. Smiths, Albertsons)
- □ Chain retail pharmacy (i.e. Walgreens, RiteAid)
- □ Mail-order pharmacy
- □ Other: *Please specify*: _____

How did you choose your pharmacy? (*check all that apply*)

- □ Convenience
- □ The pharmacist and staff
- □ My insurance company told me where to get my medications
- □ I was referred to my pharmacy by my doctor
- □ I was referred to my pharmacy by a family member or friend

What type of insurance do you have to help you with your prescriptions? (*check all that apply*)

- □ Commercial plan from my employer (i.e. SelectHealth, United, Aetna)
- □ Medicare Part D
- □ Prescription discount program (not related to my health insurance)
- □ No prescription benefit coverage

Have you ever heard of '*medication therapy management*' or a '*medication check-up*?' (*check one*)

- □ No
- □ Yes, but I'm not sure what it means
- □ Yes, and I know what it means

Please indicate if you have experienced any of the following:

(*check all that apply*)

- □ I have experienced a bad side effect from a medication.
- □ I have had trouble paying for medication.
- □ I have forgotten to take my medications every day.
- □ I have forgotten to have my medications refilled on time.
- □ I have left my doctor's office with questions about my conditions or what I am supposed to do.

- □ I have had difficulty getting my doctor's office to call me back.
- □ I have not understood exactly why I am taking some medications

What is your employment status? (*check one*)

(*over*)

- □ Full-time
- □ Part-time
- □ Not employed outside the home
- □ Retired and not working
- □ Retired and working full- or part-time

What is the highest level of education you have completed? (*check one*)

- □ Some High School
- □ High School Diploma
- □ Some College
- □ Associate's Degree
- □ Bachelor's Degree
- □ Graduate Degree

What is your age group? (*check one*)

- □ 18 to 30 years
- □ 31 to 40 years
- □ 41 to 50 years
- □ 51 to 60 years
- □ 61 to 70 years
- □ 71 to 80 years
- □ 81 years or older

APPENDIX E

SLIDE PRESENTATION FOR FOCUS GROUPS

Intermountain Healthcare
Department of Pharmacy Services
Sean Meegan
Missy Skelton Duke

Medication Checkup

Special visit with your pharmacist

- Review your current conditions and medications
- Find ways to improve how your medicines are working for you
- Create or update your medication list
- Follow-up with your doctors

Medication Checkup

Review conditions and medications...

- Match your conditions with your medications
- Spend time with you to make sure you have all of the information you need about your conditions and how those medicines are helping

Create or update your medication list...

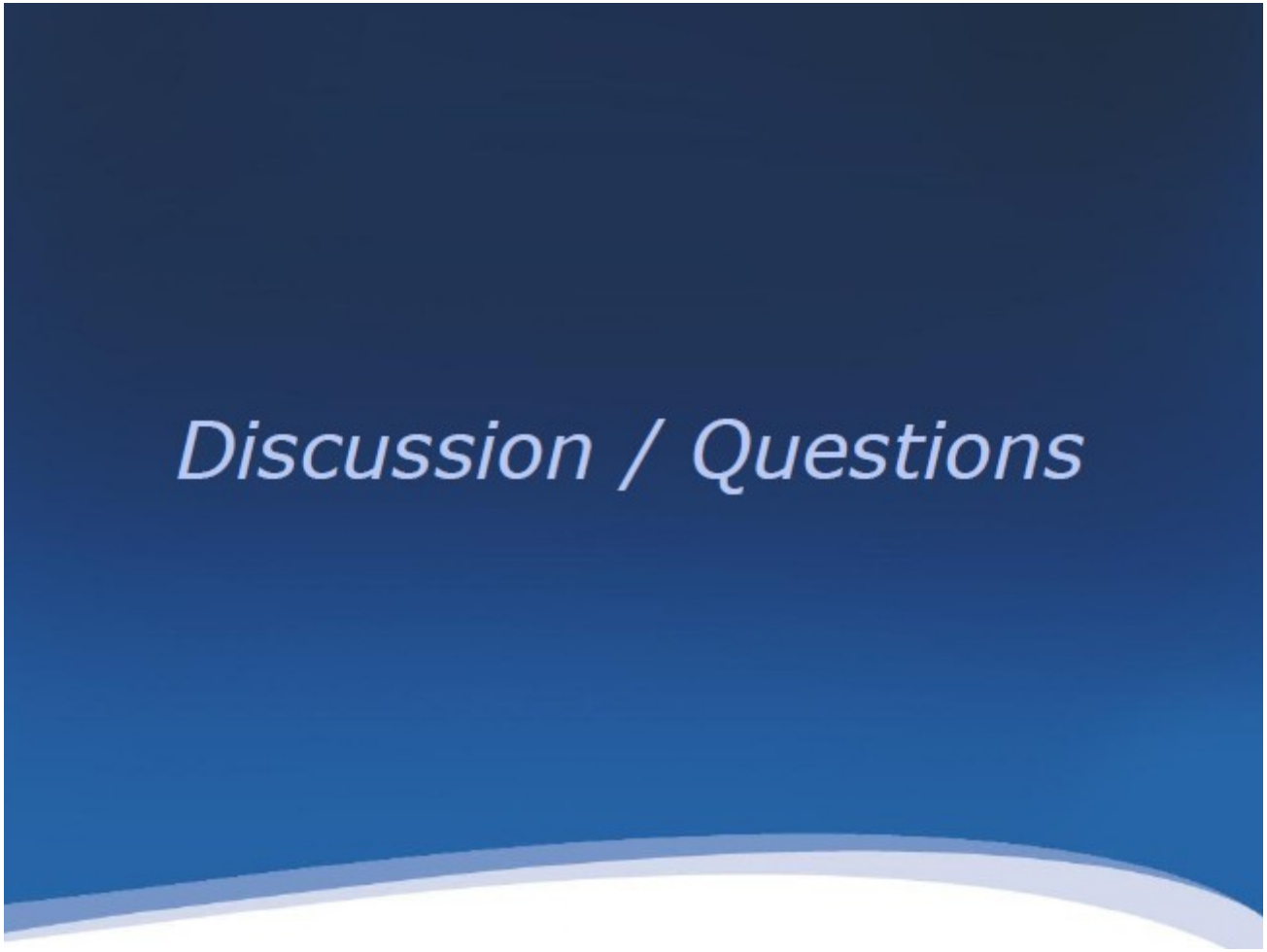
- Provide you with a complete medication list that you carry with you

Find ways to improve...

- Help you get to your goal
- Help your medication regimen work better for you
- Help you remember to take your medications on time

Follow-up with your doctors...

- Communicate with your doctors
- Work with them to make the right changes to your medications


Discussion / Questions

Medication Team

You… Your Doctor… Your Pharmacist

…Many conditions require medication

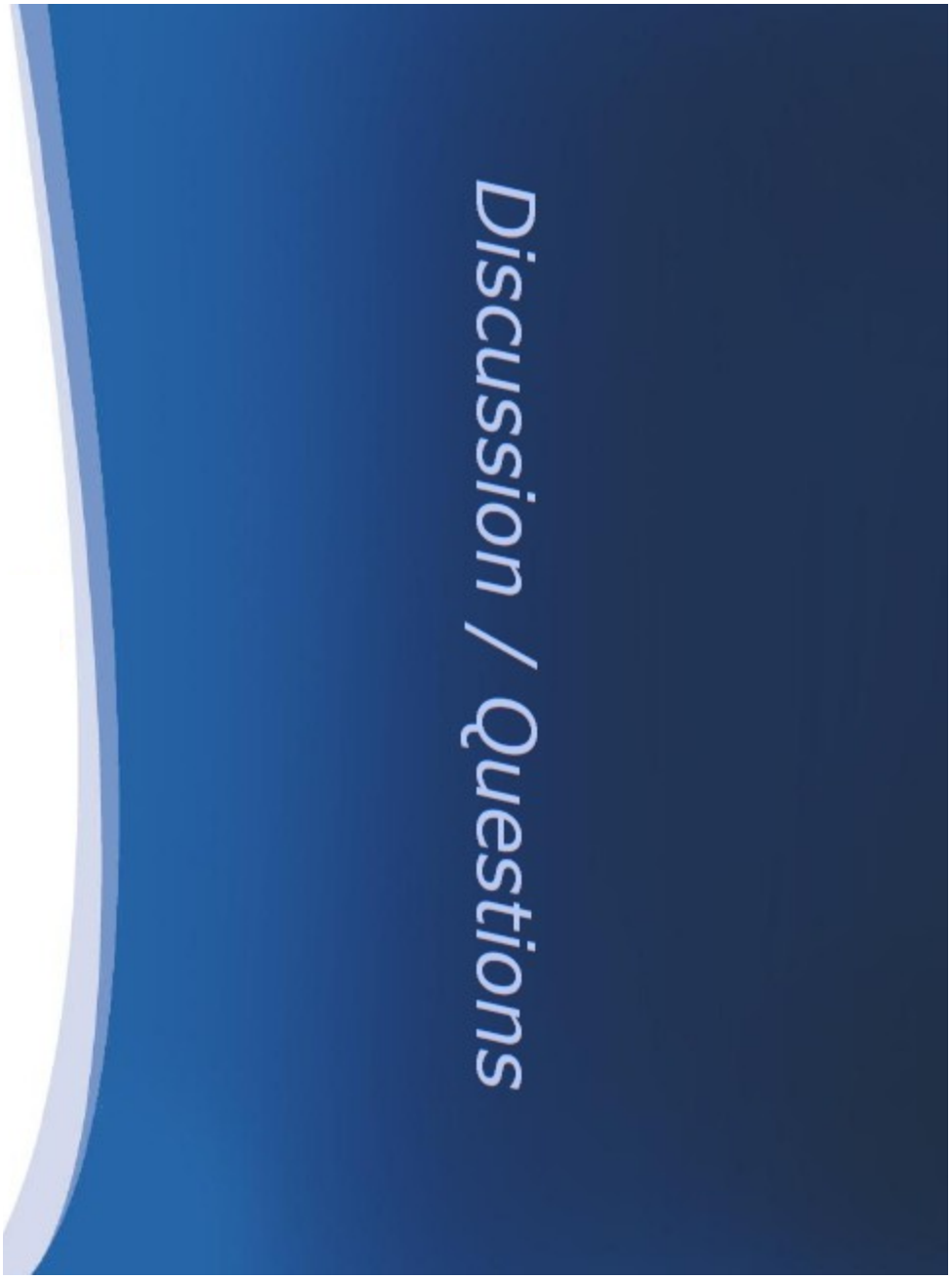
Based on your needs, your doctor asks your pharmacist to:

- Select the right medication
- Order labs that relate to your medication
- Change your dose to make sure that your goals are being met

Medication Team

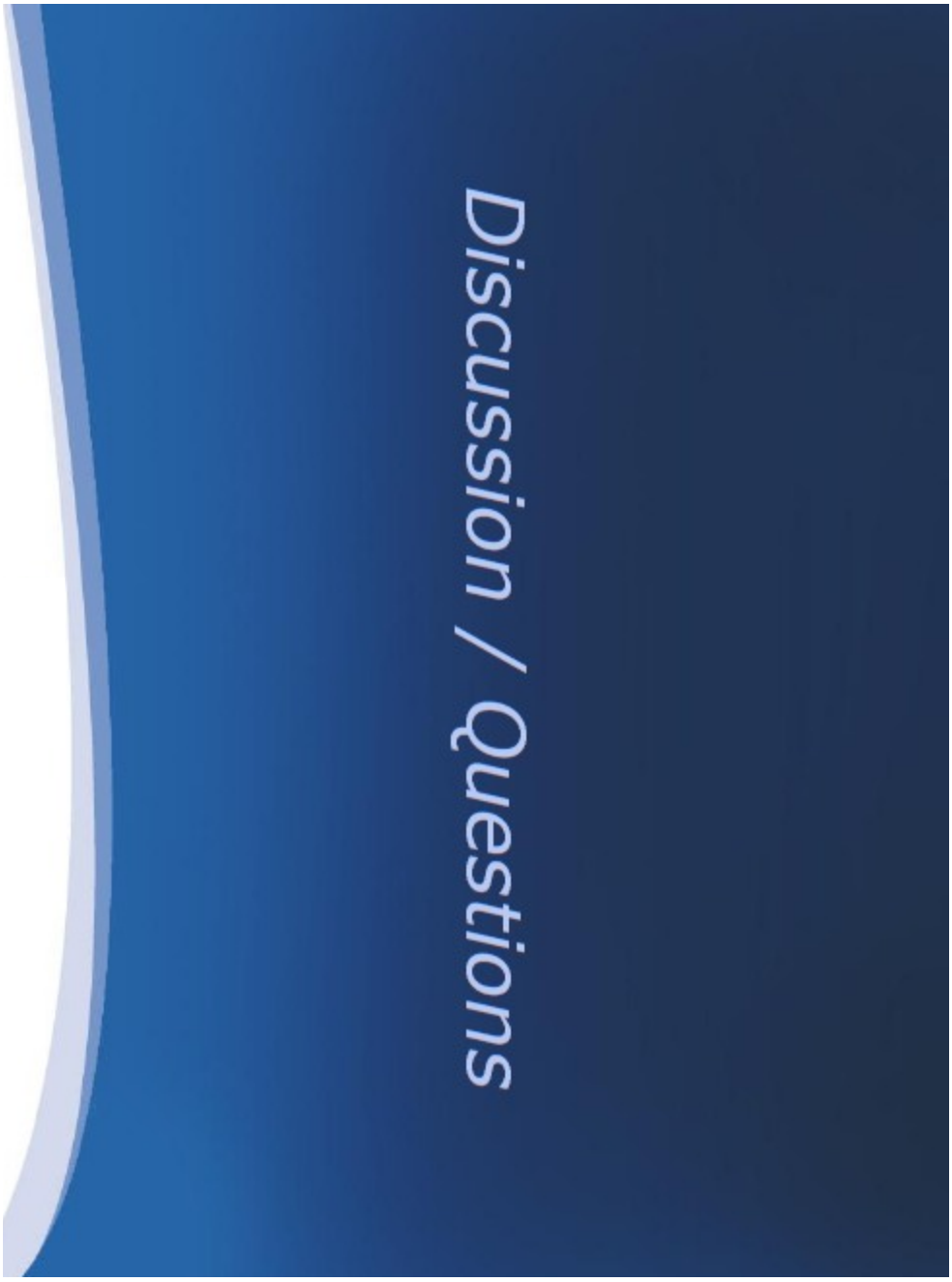
Your doctor will ask your pharmacist to choose the best medication for you…

- Your pharmacist will look at:
  - Your condition
  - Your labs
  - Your insurance
- Your pharmacist will monitor and communicate with your doctor


Discussion / Questions

Getting the most out of your trip to the pharmacy…

- *Private consultation areas*
- *Learn about your medicines while you wait for your prescriptions*
  - Get your immunizations
  - Review or update your personal health record
  - Watch educational videos
  - Check your blood pressure
  - Visit the lab


Discussion / Questions


Thank You!

APPENDIX F

FOCUS GROUP GUIDE

Outpatient Pharmacy

Focus Group Guide

Strategic Planning and Research

- Hello and Welcome
- Introductions
    - Sean – Senior Researcher, moderator
    - Missy – Pharmacy Resident who will describe some of the pharmacy topics we'll discuss
- Purpose and Structure of the Focus Group
    - Consent Forms
    - Purpose – To understand your experiences with and perceptions of some unique pharmacy services
    - Brief written survey
    - Brief Discussion
    - 3 Descriptions of Pharmacy Services and Discussions of Each
- Survey

Let's begin by talking about some of your pharmacy and medication experiences. I'd like you to consider your experiences with pharmacists, pharmacies, prescriptions, and dosages and help us understand any issues, challenges, or problems you have had. Our goal isn't to identify what one pharmacy or another did wrong. Rather, our goal is to understand any challenges you have experienced in managing medications and what might be done to make that easier or more effective for you.

So, what kinds of issues, challenges, or problems have you had in managing your medications with a pharmacy?

Ok. At this point, I'd like to have Missy provide a general overview of a particular pharmacy service and then we'll spend a few minutes discussing it.

Description 1 – Medication Check-Up
Missy

- What would you say are some of the benefits or advantages of this service?
- What would you say are some of the drawbacks or limitations of this service?
- Do you think you would use this kind of a service from a pharmacist? Why or why not?
- What else would you want to know about this kind of service before you'd use it?
- What else do you think should be included in this kind of service?

Great. Now once again I'm going to have Missy provide a general overview of another pharmacy service and then we'll orient our next discussion around that.

Description 2 – Pharmacists Helping with Your Care
Missy

- What would you say are some of the benefits or advantages of this service?
- What would you say are some of the drawbacks or limitations of this service?
- Do you think you would use this kind of a service from a pharmacist? Why or why not?
- What else would you want to know about this kind of service before you'd use it?

Ok. Thanks for your ideas there. I'm going to ask Missy to provide a general overview of just one more pharmacy service and we'll wrap up our time together with a discussion about that.

Description 3 – Getting the Most Out of Your Trip to the Pharmacy
Missy

- Do you think you would take advantage of some of these activities when you come in to pick up a prescription? Why or why not?
- Which of the activities would be most useful or meaningful to you?
- What other activities or information do you think you would find useful or meaningful when you come in to pick up a prescription?